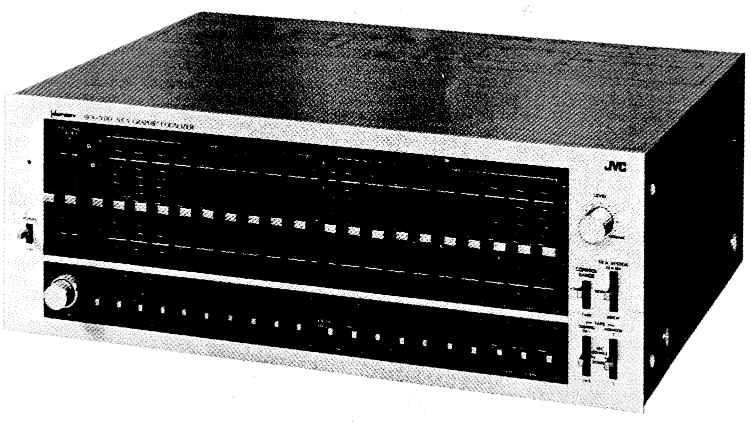
JVC

SERVICE MANUAL

MODEL
SEA-7070
S.E.A. GRAPHIC EQUALIZER



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1. Specifications

Dimensions : 6-1/4"(H) x 16-1/2"(W) x 13-1/2"(D)
(16 cm x 42 cm x 34.4 cm)

Weight (Net) : 19 lbs. (8.6 kg)

Input Section
- Input Impedance
  - SEA INPUT : 50 kΩ
  - TAPE-1, 2 (PLAY) : 50 kΩ
  - TAPE-1, 2 (PLAY:DIN) : 50 kΩ

Output Section
- SEA OUTPUT
  - FIXED/VARIABLE : 330 Ω/330 Ω
  - TAPE-1, 2 (REC:DIN) : 80 kΩ
- Rated Output : 2 Vrms (at SEA Flat)
- Maximum Output : 8 Vrms, min (at SEA Flat)
- Total Harmonic Distortion : 0.005 % (at 1 kHz, Rated Output)
- Gain
  - SEA Flat : 0 dB (SEA Input ATT: 0 dB)
  - SEA Defeat : 0 dB (SEA Input ATT: 0 dB)
- Frequency Response
  - SEA Flat : 20 Hz – 100 kHz (+0, -0.5 dB)
- Signal-to-Noise Ratio : 115 dB (Rated Output, IHF A Network Short Circuit)

Control Section
- SEA Center Frequencies
  - 10-Zone : (-1/3 oct./Preset Frequency/+1/3 oct.)
    25 Hz/31.5 Hz/40 Hz, 50 Hz/63 Hz/80 Hz,
    100 Hz/125 Hz/160 Hz, 200 Hz/250 Hz/315 Hz,
    400 Hz/500 Hz/630 Hz, 800 Hz/1 kHz/1.25 kHz,
    1.6 kHz/2 kHz/2.5 kHz, 3.15 kHz/4 kHz/5 kHz,
    6.3 kHz/8 kHz/10 kHz, 12.5 kHz/16 kHz/20 kHz
  - Additional Zone : 22.4 Hz, 45 Hz, 90 Hz, 180 Hz, 355 Hz, 710 Hz, 1.4 kHz,
    2.8 kHz, 5.6 kHz, 11.2 kHz, 22.4 kHz
- SEA Control Range : ± 12 dB, ± 6 dB Selectable by Control Range Switch

Note: Mounting on BTS standard racks is possible with the addition of the optional BH-150 bracket.

Rating, Line Voltage Selector, Power Outlet

	Canada U.S.A.	Continental Europe	Australia U.K.	Other Areas
Power Supply	AC 120 V, 50/60 Hz	AC 220 V∿, 50 Hz	AC 240 V∿, 50 Hz	AC 100 V – 240 V selectable, 50/60 Hz
Power Consumption	27 W	27 W	27 W	27 W
Line Voltage Selector	Not fitted	Not fitted	Not fitted	Fitted
Power Outlet	Fitted	Not fitted	Not fitted	Fitted

2. New Technique Information

2-(1) Block Diagram

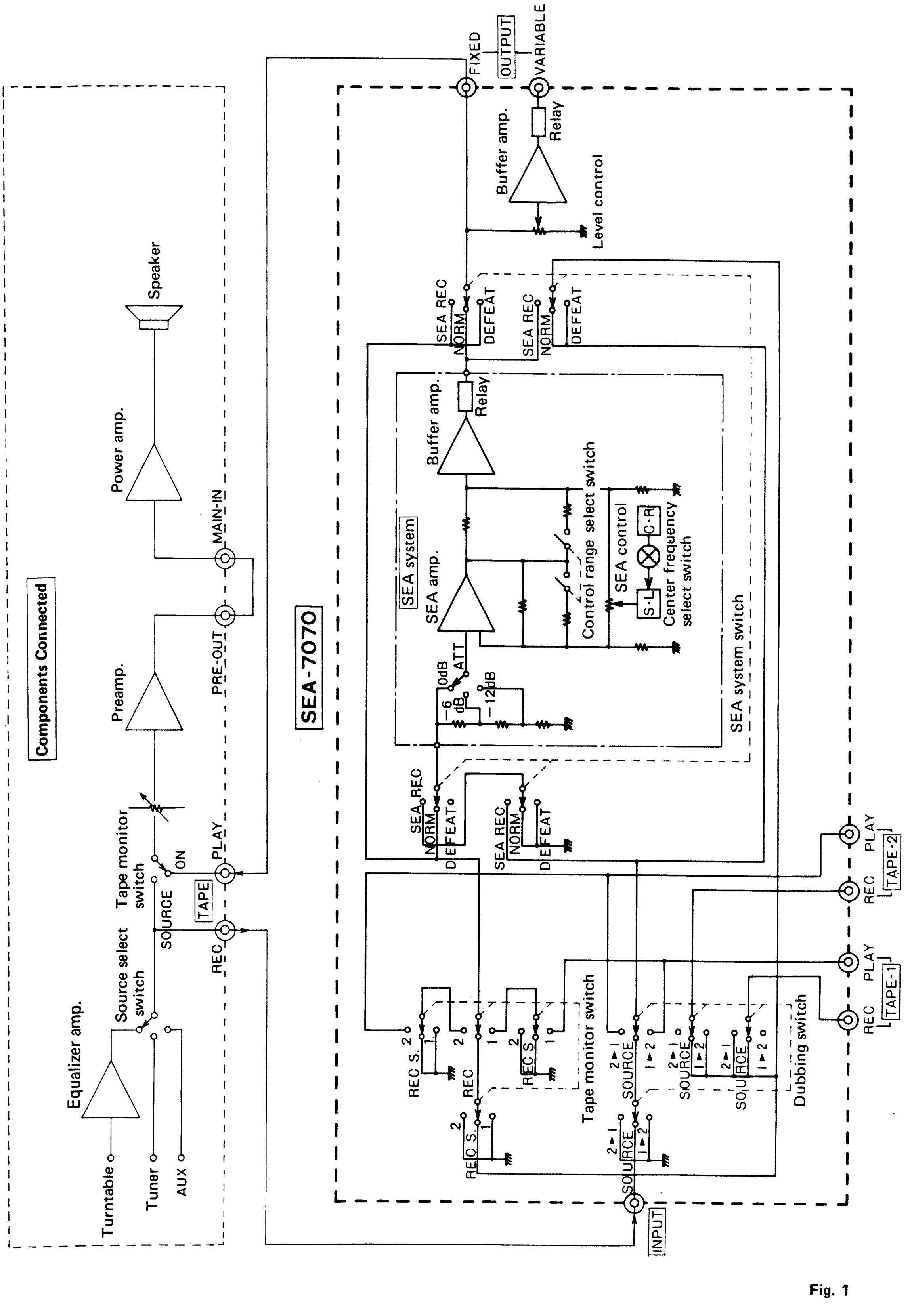
Components Connected
Equalizer amp.
Turntable
Tuner
AUX
Source select switch
SOURCE
Tape monitor switch
ON
TAPE
REC
PLAY
Preamp.
PRE-OUT
MAIN-IN
Power amp.
Speaker
SEA-7070
INPUT
OUTPUT
FIXED
VARIABLE
Buffer amp.
Relay
Level control
SEA REC
NORM
DEFEAT
SEA system
SEA amp.
ATT
0dB
−6 dB
−12dB
Control range select switch
SEA control
S·L
C·R
Center frequency select switch
SEA system switch
REC S.
Tape monitor switch
2▸1
1▸2
Dubbing switch
TAPE-1
TAPE-2

Fig. 1

2-(2) Semiconductor L-element

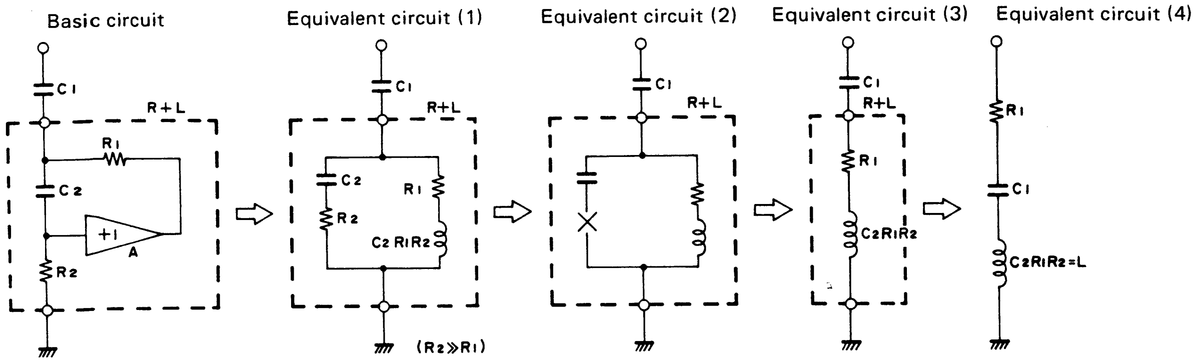

Fig. 2 Process of analyzing the semiconductor inductance circuit

Fig. 2 illustrates the process of analyzing the semiconductor-inductor employed in the SEA-7070 from the basic to the grounded series resonance circuit.
Fig. 3 shows a more detailed analysis of the "R + L" part enclosed by the dotted line in Fig. 2.

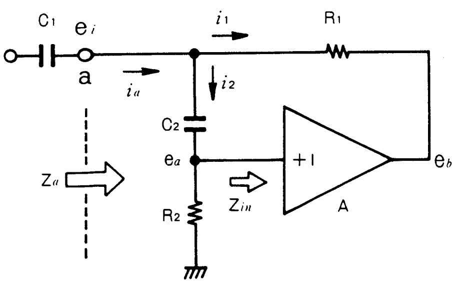

Fig. 3 Semiconductor-inductor equivalent circuit

Conditions:

1. **A** is a buffer amplifier rated at Z_{in} = infinity, $Z_{out} = 0$ and gain = 1.
2. Relation between R_1 and R_2 is $R_2 \gg R_1$.

Result:

$$Z_a = \frac{e_i}{i_a} = R_1 + j\omega C_2R_1R_2 \quad \dots\dots\dots\dots\dots\dots \quad (1)$$

Since **A** in Fig. 3 is a buffer amplifier having a gain of 1, resulting in $e_a = e_b$, and e_a is a voltage divided by C_2 and R_2.

$$e_a = \frac{R_2}{\frac{1}{j\omega C_2} + R_2}\cdot e_i = \frac{j\omega C_2R_2}{1 + j\omega C_2R_2}\cdot e_i = e_b \quad \dots\dots\dots \quad (2)$$

i_2 is negligible compared with i_1 due to the conditions of Z_{in} = infinity and $R_2 \gg R_1$. Therefore, with $i_a \fallingdotseq i_1$,

$$i_a = i_1 = \frac{e_i - e_b}{R_1} = \frac{e_i - \frac{j\omega C_2R_2}{1 + j\omega C_2R_2}\cdot e_i}{R_1} = \frac{e_i}{R_1 + j\omega C_2R_1R_2}.$$

$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (3)$$

Therefore, input impedance Z_a from terminal "a" to the circuit is given by:

$$Z_a = \frac{e_i}{i_a} = \frac{e_i}{\frac{e_i}{R_1 + j\omega C_2R_1R_2}} = R_1 + j\omega C_2R_1R_2$$

This is the result of analysis shown by equation (1).
The resonance frequency f_0, Q and other circuit constants of the resonance circuit employing the semiconductor-inductor are designed as determined by the following equations:

$$f_0 = \frac{1}{2\pi\sqrt{C_1C_2R_1R_2}}, \quad Q = \sqrt{\frac{C_2R_2}{C_1R_1}} \quad \text{or } Q = \frac{1}{2\pi f_0R_1C_1}$$

$$C_1 = \frac{1}{2\pi f_0R_1Q}, \quad C_2 = \frac{Q}{2\pi f_0R_2}$$

$$R_1 = \frac{1}{2\pi f_0C_1Q}, \quad R_2 = \frac{Q}{2\pi f_0C_2}$$

In the SEA-7070, with the circuit constants determined by these equations, the load on the buffer amplifier is greatly reduced compared with the semiconductor-inductors previously employed by JVC. This has made it possible to greatly expand the dynamic range of the semiconductor-inductor. (See Fig. 4)
The condition $R_2 \gg R_1$ should be satisfied when the equivalent circuit (1) is transformed into (2) in Fig. 2.
However, in practice, it is impossible to make R_2 infinite and certain circuit technique is employed for practical use in order to eliminate the effect of R_2.
The values of C_1 and C_2 have been reduced compared with the semiconductor-inductors previously employed by JVC. This made possible the employment of Mylar capacitors instead of electrolytic capacitors which are subject greater loss, resulting in excellent resonance characteristics with good skirts.

2-(3) Input Attenuator

Since the input dynamic range is more than double that of previous JVC's SEA models, through employment of the newly developed semiconductor-inductor, there will not be many situations in normal use which require input attenuation. On input attenuator switch, with three settings of 0 dB, -6 dB and -12 dB is, however, provided on the rear panel for experimental and special applications.

Note: Set the switch to "0 dB" for normal use.

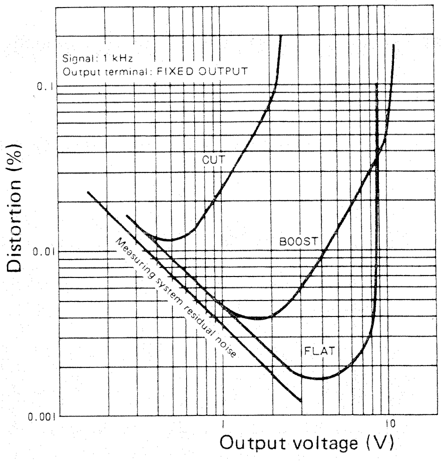

Fig. 4

2-(4) Center Frequency Diagram

The 10 center frequencies of the 10-zone SEA control section are at intervals of one octave starting from 1 kHz in both directions and can also be shifted by ± 1/3 octave independently by a flick of the select switches. Complementing the 10 SEA controls is another SEA control labelled "ADDITIONAL CONTROL" which controls the band selected with the additional control center frequency selector. The center frequencies selectable lie at the mid-point adjacent the center frequencies of the 10-zone SEA control section. Eleven frequency points including the low end of 22.4 Hz and the high end of 22.4 kHz can be selected for additional adjustment. With the 10 basic center frequencies, their ± 1/3 octave-shift points and the additional control which permits selection of 11 different center frequencies, the SEA-7070 enables you to select 41 different center frequencies. This means that the 11 control knobs permit about 650,000 (649,539) different center frequency arrangements, which results in practically unlimited tone adjustment whatever the condition of your room or audio system.
Fig. 7 illustrates the frequency spectrum and all possible center frequencies, with the basic 10 frequency points indicated by marks ♦, those shifted by +1/3 oct. by the descending solid arrows, those shifted by -1/3 oct. by the ascending solid arrows and the frequency points of the additional control indicated by the dotted arrows.

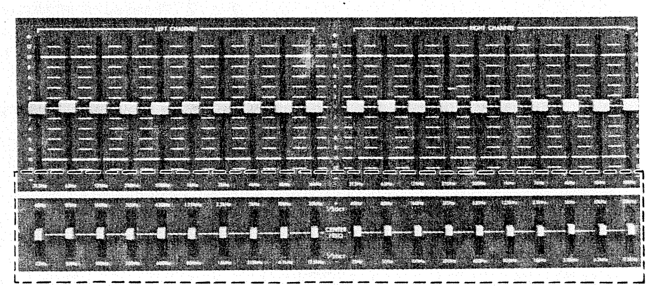

Fig. 5

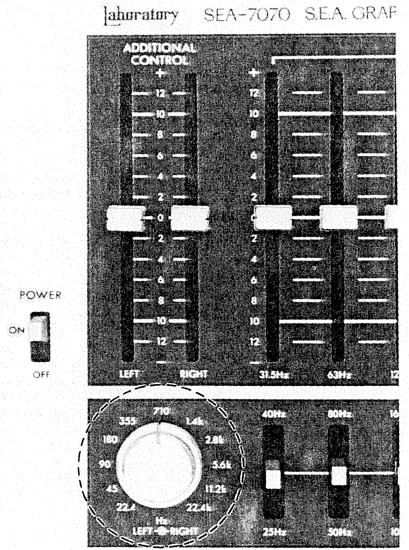
laboratory SEA-7070 S.E.A. GRAP
ADDITIONAL CONTROL
POWER
ON
OFF
LEFT
RIGHT
31.5Hz
63Hz
40Hz
80Hz
25Hz
50Hz
355
710
1.4k
2.8k
180
5.6k
90
11.2k
45
22.4
22.4k
Hz
LEFT ◆ RIGHT

Fig. 6

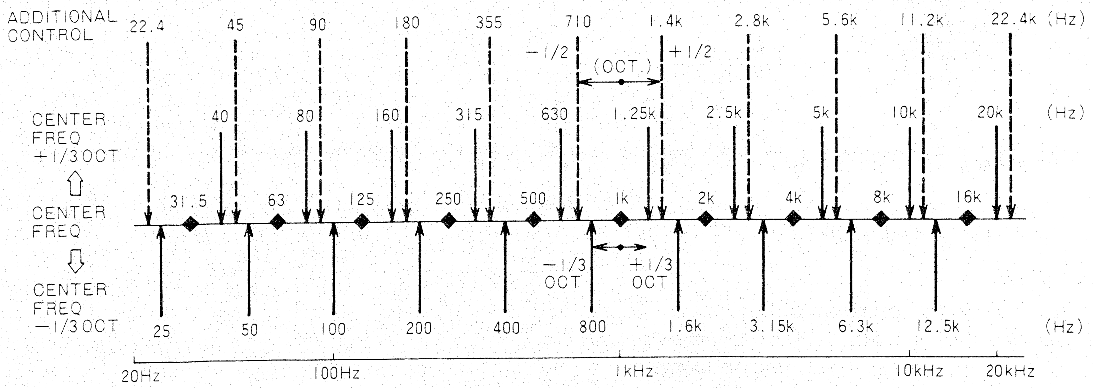
ADDITIONAL CONTROL
22.4
45
90
180
355
710
1.4k
2.8k
5.6k
11.2k
22.4k (Hz)
-1/2
+1/2
(OCT.)
CENTER FREQ +1/3OCT
40
80
160
315
630
1.25k
2.5k
5k
10k
20k
(Hz)
CENTER FREQ
31.5
63
125
250
500
1k
2k
4k
8k
16k
CENTER FREQ -1/3OCT
-1/3 OCT
+1/3 OCT
25
50
100
200
400
800
1.6k
3.15k
6.3k
12.5k
(Hz)
20Hz
100Hz
1kHz
10kHz
20kHz

Fig. 7 Center frequency diagram

3. Operation

3-(1) Connection Diagram

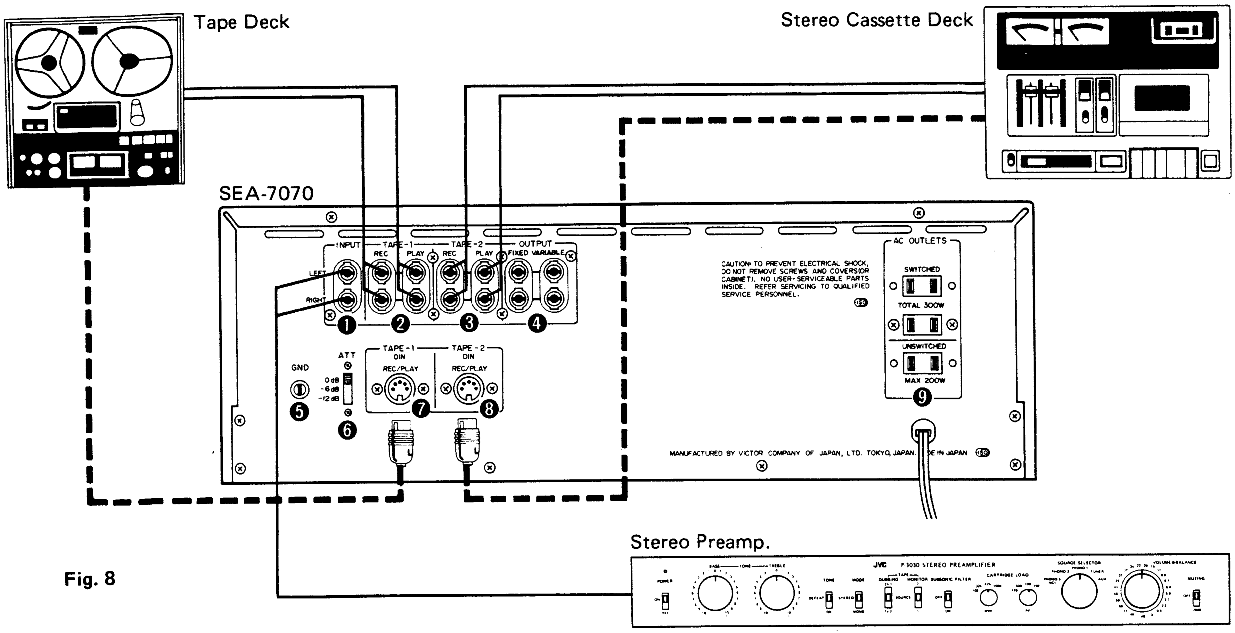
Tape Deck
Stereo Cassette Deck
SEA-7070
INPUT
TAPE-1
TAPE-2
OUTPUT
REC
PLAY
FIXED
VARIABLE
LEFT
RIGHT
1
2
3
4
GND
ATT
0 dB
-6 dB
-12 dB
TAPE-1 DIN REC/PLAY
TAPE-2 DIN REC/PLAY
5
6
7
8
CAUTION: TO PREVENT ELECTRICAL SHOCK, DO NOT REMOVE SCREWS AND COVERS(OR CABINET). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
AC OUTLETS
SWITCHED
TOTAL 300W
UNSWITCHED
MAX 200W
9
MANUFACTURED BY VICTOR COMPANY OF JAPAN, LTD. TOKYO, JAPAN.
Stereo Preamp.
JVC P-3030 STEREO PREAMPLIFIER

Fig. 8

Important notes:

1. No sound will be heard for about 3 or 4 seconds after the power is turned on. This is not due to any defect of the unit, but due to the operation of the protective circuit which prevents output noises until the circuit components are stabilized.
2. Do not plug the power cord into an AC outlet until all connections are complete.
3. Switch the power off when connecting any component.
4. Connect plugs or wires firmly. Poor contact may result in hum.
5. Connect the components with the correct left and right channel connections. Reversed channels will degrade the stereo effect.
6. Do not connect equipment requiring more than the rated power to the AC outlets. Do not employ these AC outlets for equipment other than audio components.
7. In this diagram separate preamplifier and power amplifier are employed. However, the connections are exactly the same if an integrated amplifier is employed.

1. **INPUT terminals**
   Connect to the tape recording output terminals of the amplifier. If your amplifier is equipped with more than one set of TAPE terminals, like TAPE-1 and TAPE-2, either can be used for the connection of the SEA-7070. However, be careful about the amplifier TAPE MONITOR switch setting.
2. **TAPE-1 REC and PLAY terminals**
   Connect a tape deck with its LINE IN to REC and LINE OUT to PLAY.
3. **TAPE-2 REC and PLAY terminals**
   Connect another tape deck with its LINE IN to REC and LINE OUT to PLAY.
4. **OUTPUT terminals**
   Connect to the amplifier tape playback terminals.
   FIXED: Employ this for normal use. When the front panel POWER switch is OFF, output is available from these FIXED terminals if the front panel SEA SYSTEM switch is set to the DEFEAT position.
   VARIABLE: The output level is variable with the front panel LEVEL control. No output is available with the POWER switch OFF, even if the SEA SYSTEM switch is set to DEFEAT.
5. **Ground terminal (GND)**
6. **Attenuator switch (ATT)**
   Set to "0 dB" for normal use.
   Refer to "2-(3) Input Attenuator".
7. **TAPE-1 DIN socket**
   For the connection of a tape deck equipped with DIN socket. This socket is in parallel with the TAPE-1 REC and PLAY terminals, so they cannot be used at the same time.
8. **TAPE-2 DIN socket**
   For the connection of a tape deck equipped with DIN socket. This socket is in parallel with the TAPE-2 REC and PLAY terminals, so they cannot be used at the same time.
9. **AC outlets (Not provided on sets intended for Continental Europe, the United Kingdom and Australia.)**
   For the connection of other audio components only.
   SWITCHED: Two SWITCHED outlets are switched off when the front panel POWER switch is switched off. The power capacity is rated at 300 W total.
   UNSWITCHED: Power is not switched off when the front panel POWER switch is off. The capacity is 200 W.

3-(2) S.E.A.-compensated Recording

1. Set the amplifier TAPE MONITOR switch to ON.
2. Select the source you wish to record with the amplifier SOURCE select switch.
3. Set the equalizer SEA SYSTEM switch to SEA REC and the TAPE DUBBING switch to SOURCE.
4. Set the equalizer TAPE MONITOR switch to REC SOURCE.
5. Adjust the S.E.A. controls to obtain the effect you desire, when tape decks are in standby.

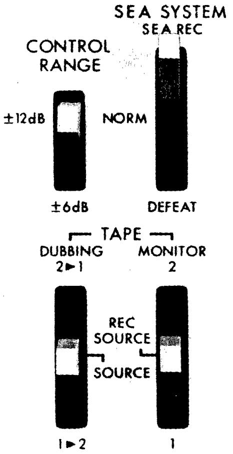
SEA SYSTEM
SEA REC
CONTROL RANGE
±12dB
NORM
±6dB
DEFEAT
TAPE
DUBBING 2►1
MONITOR 2
REC SOURCE
SOURCE
1►2
1

Fig. 9

Notes:

1. Since the TAPE MONITOR switch is set to REC SOURCE, the sound you hear from the speakers or headphones is the S.E.A.-compensated source sound just before being applied to the recording head of the tape deck.
2. If you have a three-head tape deck with independent record and play heads, you can also monitor the recorded sound by flipping the TAPE MONITOR switch to "1" or "2", depending on the connection.
3. If you wish to monitor the direct source sound, not compensated by the S.E.A. Graphic Equalizer, change the amplifier TAPE MONITOR switch to SOURCE (or OFF). Adjustment of the amplifier tone controls has no effect on the recordings.
4. The recording output is available at both the TAPE-1 and TAPE-2 REC terminals simultaneously, so it is possible to record with two tape decks at the same time.

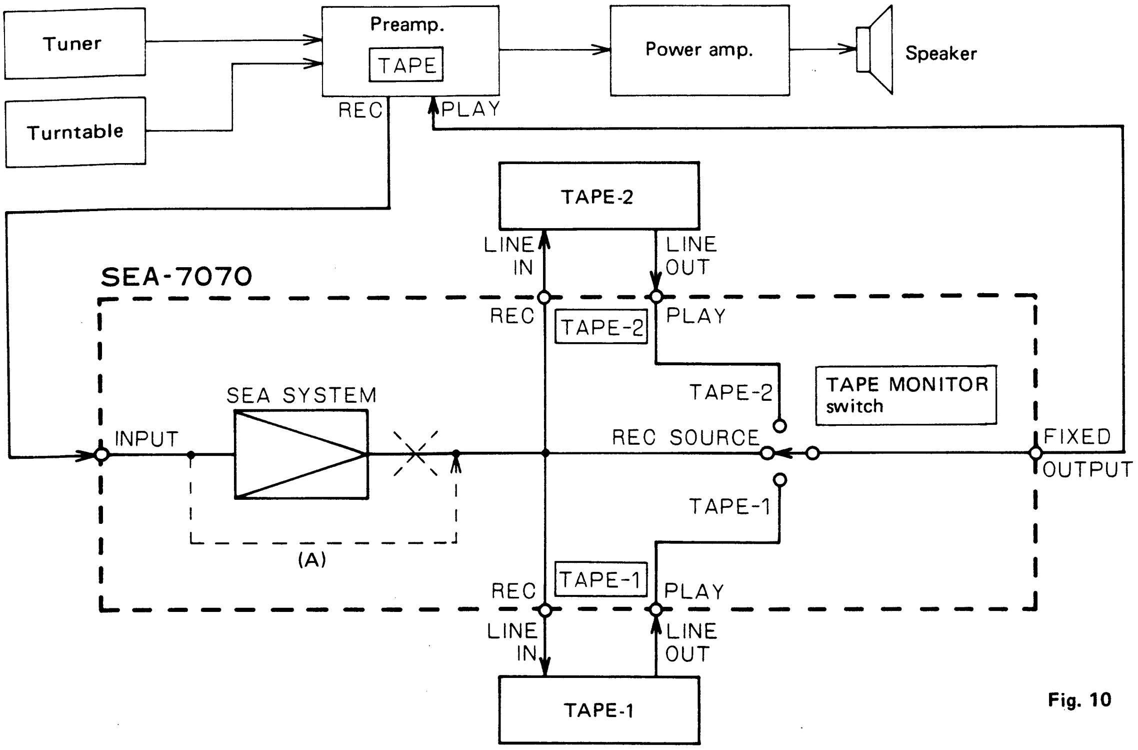
Tuner
Turntable
Preamp.
TAPE
REC
PLAY
Power amp.
Speaker
TAPE-2
LINE IN
LINE OUT
SEA-7070
REC
TAPE-2
PLAY
TAPE-2
TAPE MONITOR switch
SEA SYSTEM
INPUT
REC SOURCE
FIXED OUTPUT
TAPE-1
(A)
REC
TAPE-1
PLAY
LINE IN
LINE OUT
TAPE-1

Fig. 10

Block diagram During S.E.A.-compensated recording

*If the SEA SYSTEM switch is at DEFEAT, the signal bypasses the S.E.A. circuit as indicated by the dotted line marked (A). At DEFEAT, the unit functions merely as a switching box.

3-(3) S.E.A.-compensated Tape Dubbing from TAPE-1 to TAPE-2

1. Set the amplifier TAPE MONITOR switch to ON.
2. Set the equalizer TAPE DUBBING switch to "1 ► 2".
3. Set the equalizer SEA SYSTEM switch to SEA REC.
4. Set the equalizer TAPE MONITOR switch to REC SOURCE.
5. Adjust the S.E.A. controls to obtain the effect you desire, when TAPE-2 deck is in standby.
6. Operate the TAPE-1 deck for playback and the TAPE-2 deck for recording.

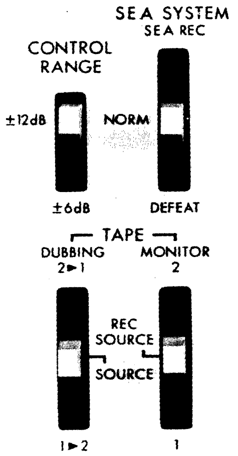
SEA SYSTEM
SEA REC
CONTROL RANGE
±12dB
NORM
±6dB
DEFEAT
TAPE
DUBBING
2►1
MONITOR
2
REC SOURCE
SOURCE
1►2
1

Fig. 11

Notes:

1. Since the TAPE MONITOR switch is set to REC SOURCE, the sound you hear from the speakers or headphones is the S.E.A.-compensated TAPE-1 playback sound just being applied to the recording head of the TAPE-2 deck.
2. If you wish to hear the direct TAPE-1 playback sound, flip the TAPE MONITOR switch to "1".
3. If the TAPE-2 deck is of the three-head type, you can also monitor the recorded sound by flipping the TAPE MONITOR switch to "2".
4. During dubbing it is possible to listen to another source. After making sure that dubbing is taking place correctly, set the amplifier TAPE MONITOR switch to SOURCE (or OFF) and select the source you wish to listen to with the SOURCE select switch.
   Adjustment of the amplifier tone controls has no effect on the material being dubbed.

From TAPE-2 to TAPE-1:
Operation and notes are exactly identical to those for dubbing from TAPE-1 to TAPE-2. Simply follow the above directions, reversing the numbers.

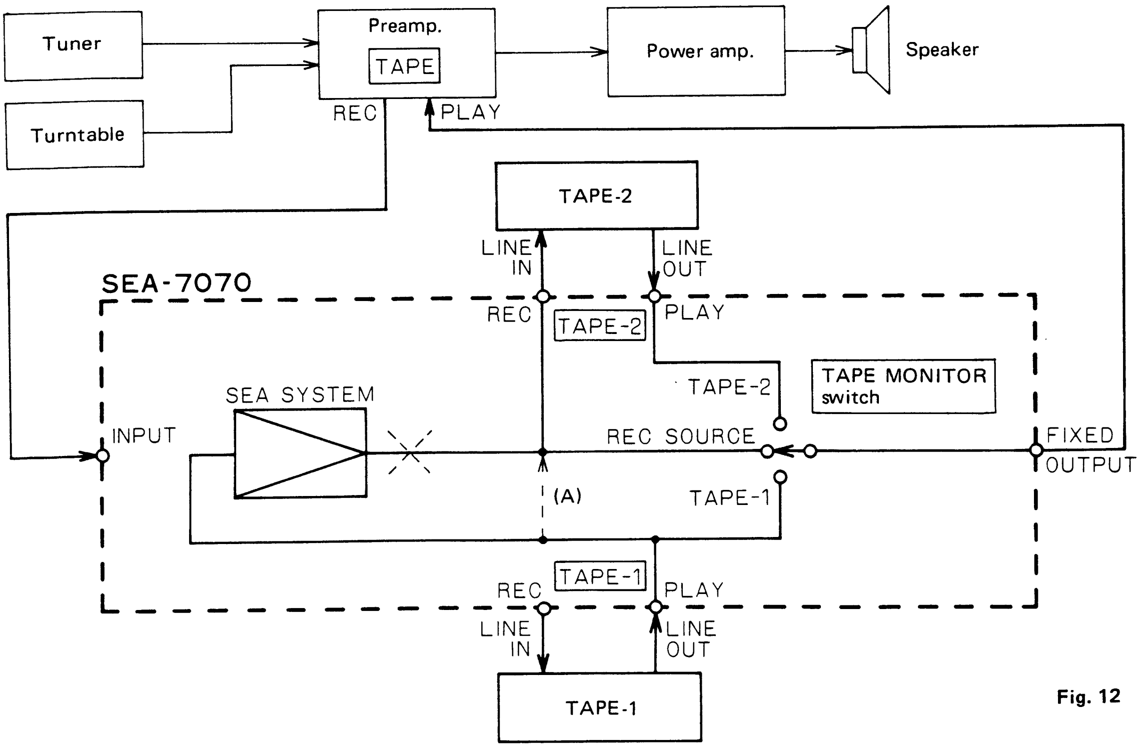
Tuner
Turntable
Preamp.
TAPE
REC
PLAY
Power amp.
Speaker
TAPE-2
LINE IN
LINE OUT
SEA-7070
REC
TAPE-2
PLAY
TAPE MONITOR switch
TAPE-2
SEA SYSTEM
INPUT
REC SOURCE
FIXED OUTPUT
(A)
TAPE-1
REC
TAPE-1
PLAY
LINE IN
LINE OUT
TAPE-1

Fig. 12

Block diagram During S.E.A.-compensated dubbing from TAPE-1 to TAPE-2
*If the SEA SYSTEM switch is at DEFEAT, the signal bypasses the S.E.A. circuit as indicated by the dotted line marked (A). At DEFEAT, the unit functions merely as a switching box.

3-(4) S.E.A.-compensated Playback

1. Set the amplifier TAPE MONITOR switch to ON.
2. Set the equalizer TAPE DUBBING switch to SOURCE.
3. Set the equalizer SEA SYSTEM switch to NORM.
4. To listen to the sources connected to the amplifier, such as turntable or tuner, select one with the amplifier SOURCE select switch and set the equalizer TAPE MONITOR switch to REC SOURCE.
5. To listen to the tape deck connected to the SEA-7070, set the TAPE MONITOR switch to "1" or "2", depending on the connection.
6. Adjust the S.E.A. controls to obtain the effect you desire.

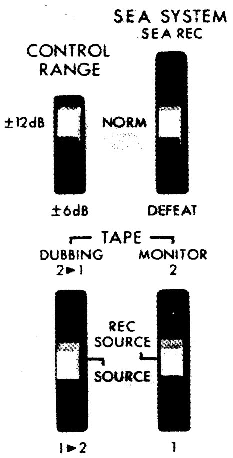
SEA SYSTEM
SEA REC
CONTROL RANGE
±12dB
NORM
±6dB
DEFEAT
TAPE
DUBBING
2►1
MONITOR
2
REC SOURCE
SOURCE
1►2
1

Fig. 13

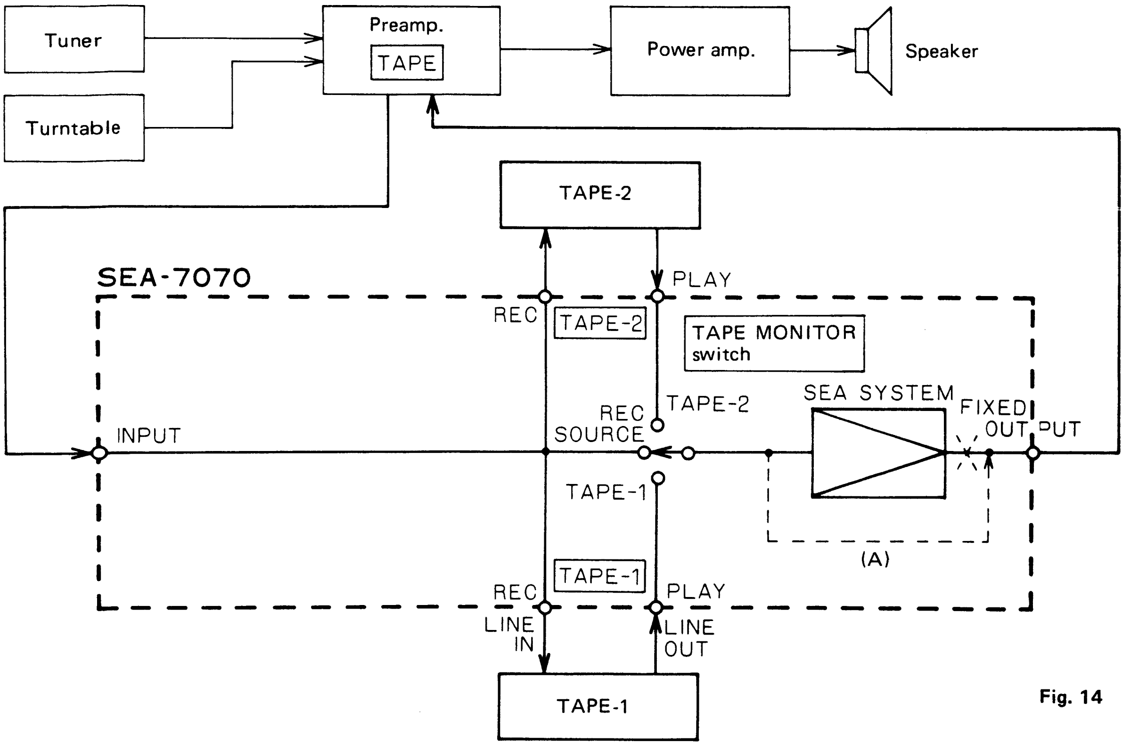
Tuner
Turntable
Preamp.
TAPE
Power amp.
Speaker
TAPE-2
SEA-7070
REC
TAPE-2
PLAY
TAPE MONITOR switch
REC SOURCE
TAPE-2
SEA SYSTEM
FIXED OUT
OUTPUT
INPUT
TAPE-1
(A)
REC
TAPE-1
PLAY
LINE IN
LINE OUT
TAPE-1

Fig. 14

Block diagram During S.E.A.-compensated playback

*If the SEA SYSTEM switch is at DEFEAT, the signal bypasses the S.E.A. circuit as indicated by the dotted line marked (A). At DEFEAT, the unit functions merely as a switching box.

4. Main Parts Location and Parts List

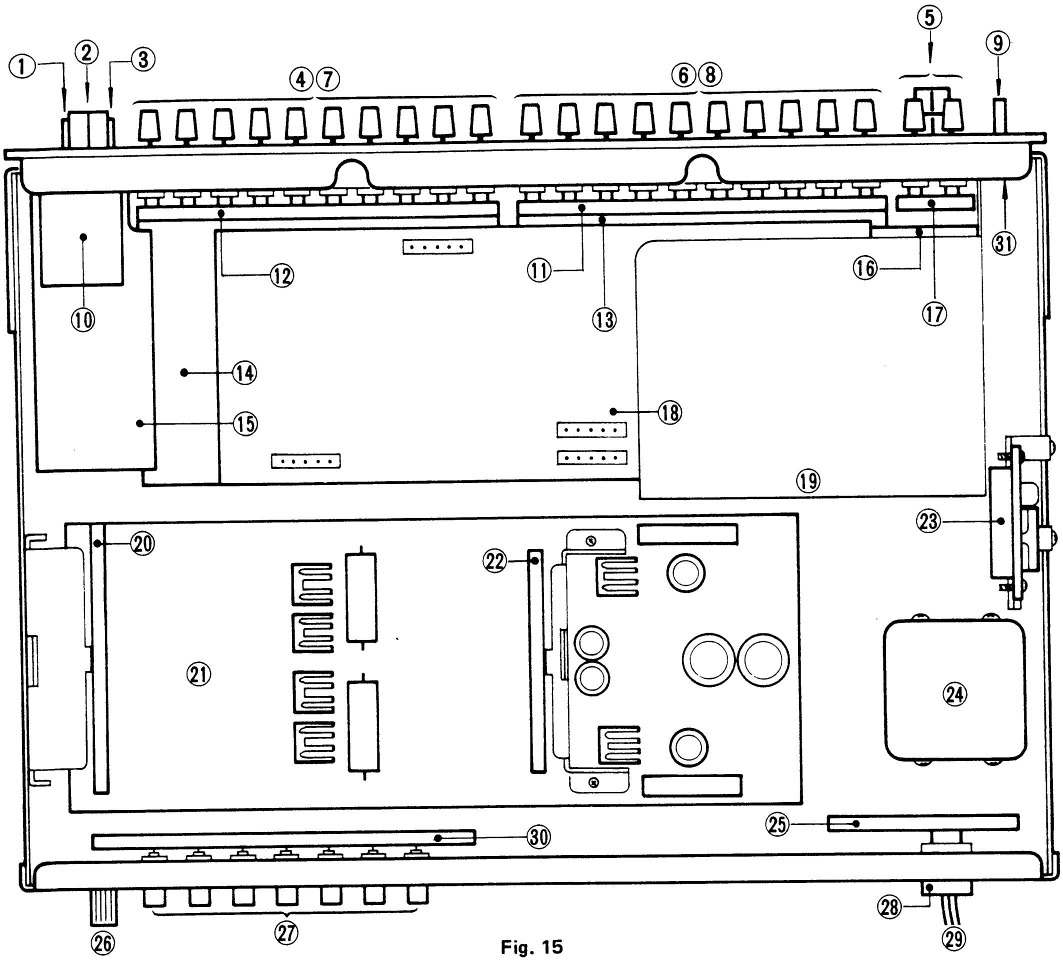

Fig. 15

1 Upper: S.E.A. system switch
  Lower: Tape monitor switch
2 Level control knob
3 Upper: Control range select switch
  Lower: Tape dubbing switch
4 Upper: S.E.A. control knobs
  Lower: S.E.A. center frequency shift switches
5 Upper: Additional control knobs
  Lower: Additional control center frequency select switches
6 Upper: S.E.A. control knobs
  Lower: S.E.A. center frequency shift switches
7 (Right channel)
8 (Left channel)
9 Power switch
10 Level control P.C. board ass'y (TAC-429)
  (TXX-41)
11 S.E.A. control P.C. board ass'y (TAC-430A) Zone-1
12 S.E.A. control P.C. board ass'y (TAC-430B) Zone-2
13 Semiconductor-inductor P.C. board ass'y (TAS-27) Zone-1
14 Semiconductor-inductor P.C. board ass'y (TAS-27) Zone-2
15 Upper: S.E.A. system switching P.C. board ass'y (TAC-428)
  Lower: Tape monitor switching P.C. board ass'y (TAC-427)
  (TXX-41)
16 Additional control frequency switching P.C. board ass'y (TAC-435)
  (TXX-43)
17 Additional control P.C. board ass'y (TAC-432)
  (TXX-43)
18 Additional control semiconductor-inductor P.C. board ass'y (TAC-431)
19 Shield cover
20 Buffer amp. P.C. board ass'y (TAC-460)
21 S.E.A. amp. and power supply P.C. board ass'y (TAP-266A)
22 Relay switch P.C. board ass'y
23 Power voltage selector
24 Power transformer
25 AC socket P.C. board ass'y (TPS-80)
26 Ground terminal
27 Input, output and tape terminals
28 AC outlet
29 Power cord
30 Terminal P.C. board ass'y (TSC-72)
31 LED P.C. board ass'y (TPS-92)
  (located above the power switch, invisible here)

5. Exploded Views and Parts List

5-(1) Front Panel

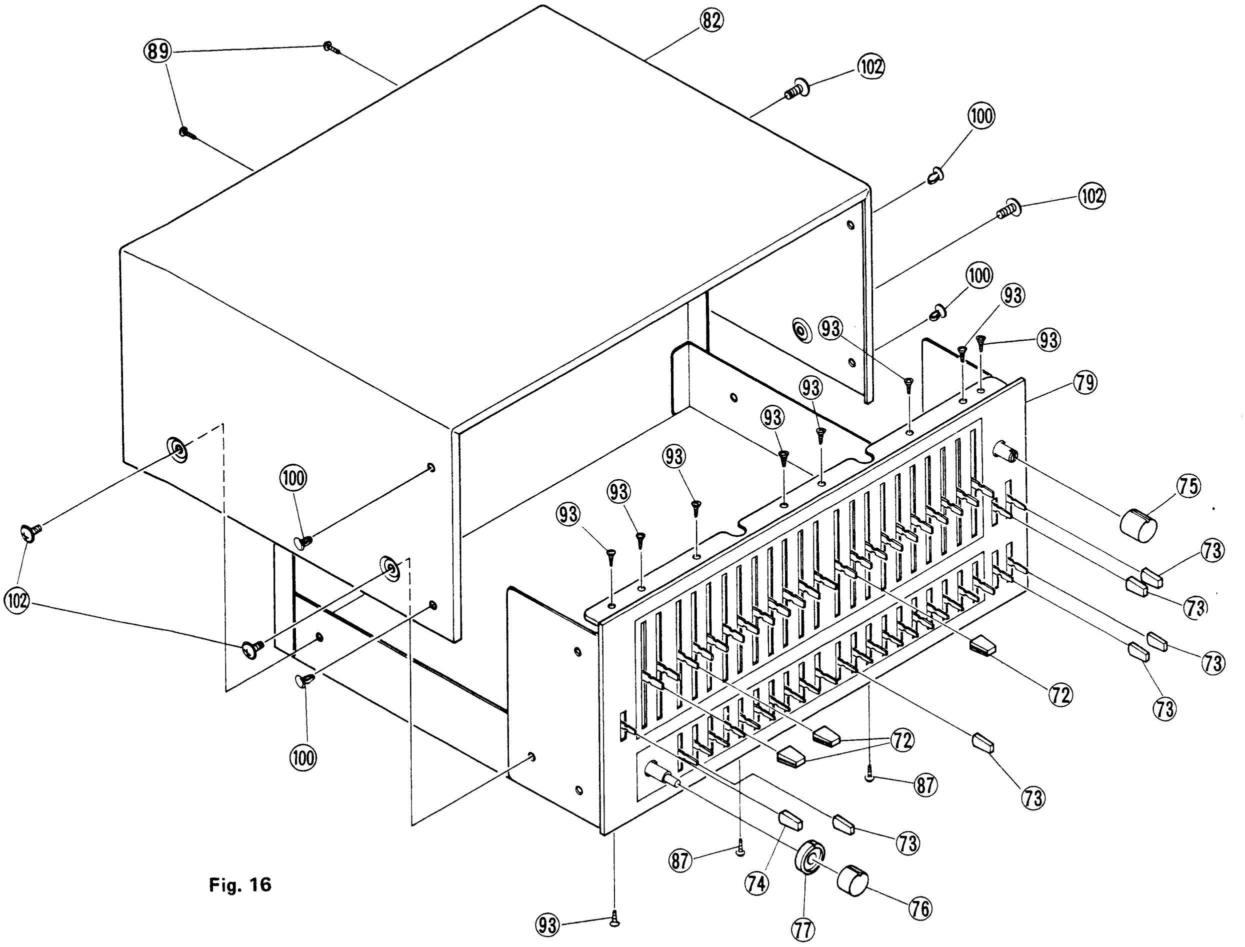

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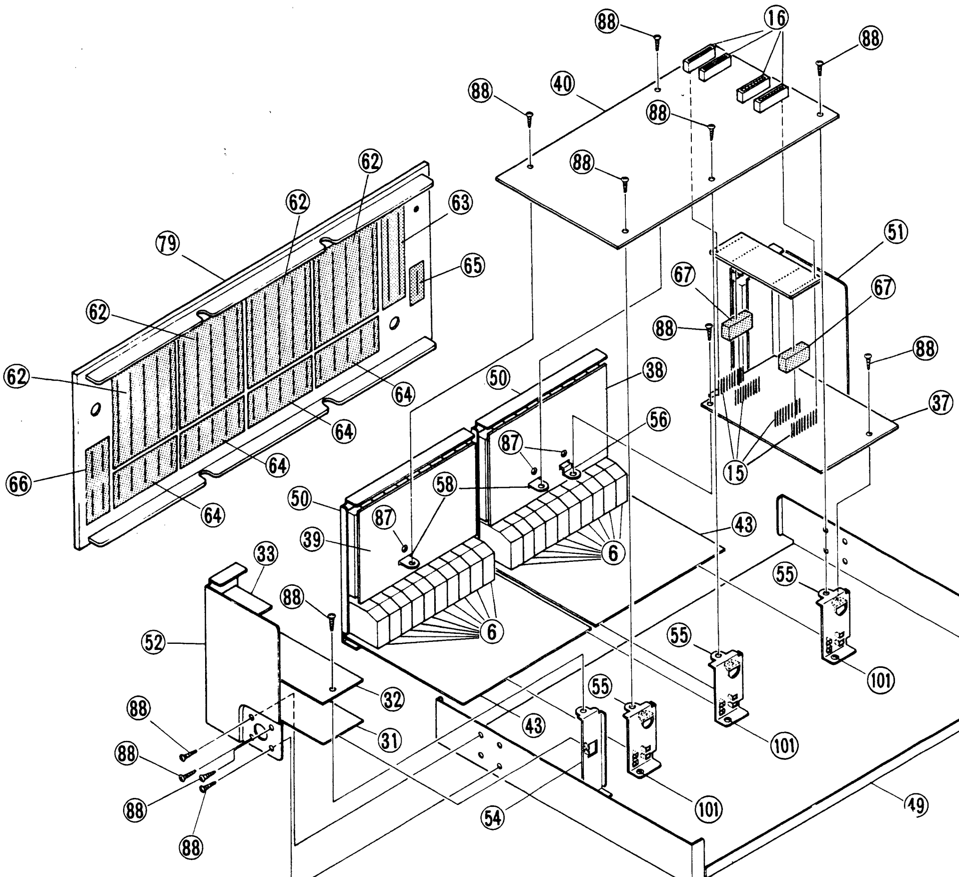
Fig. 16

Parts List

Item No.	Part Number	Description	Remarks
72	E61435-001	Slide Knob	S.E.A. Control, Additional S.E.A. Control
73	E61436-001	Lever Knob	S.E.A. Frequency Selector (± 1/3 oct.), Control Range (± 12 dB, ± 6 dB), Tape Dubbing, Tape Monitor, S.E.A. System
74	E61437-001	Lever Knob	Power
75	E61438-001	Knob	Level Control (variable output)
76	E61439-001	Knob	Additional Control Frequency Selector (Left channel)
77	E61440-001	Knob	Additional Control Frequency Selector (Right channel)
79	E22447-002	Front Panel Ass'y	
82	E22213-001	Metal Cover	Top Cover
87	SBSB3006M	Screw	
89	SBSB3008N	Screw	
93	SSSB3006N	Screw	
100	E48729-001	Plastic Rivet	
102	E61660-001	Special Screw	Fixing Top Cover

5-(2) S.E.A. Panel



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101
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Fig. 17

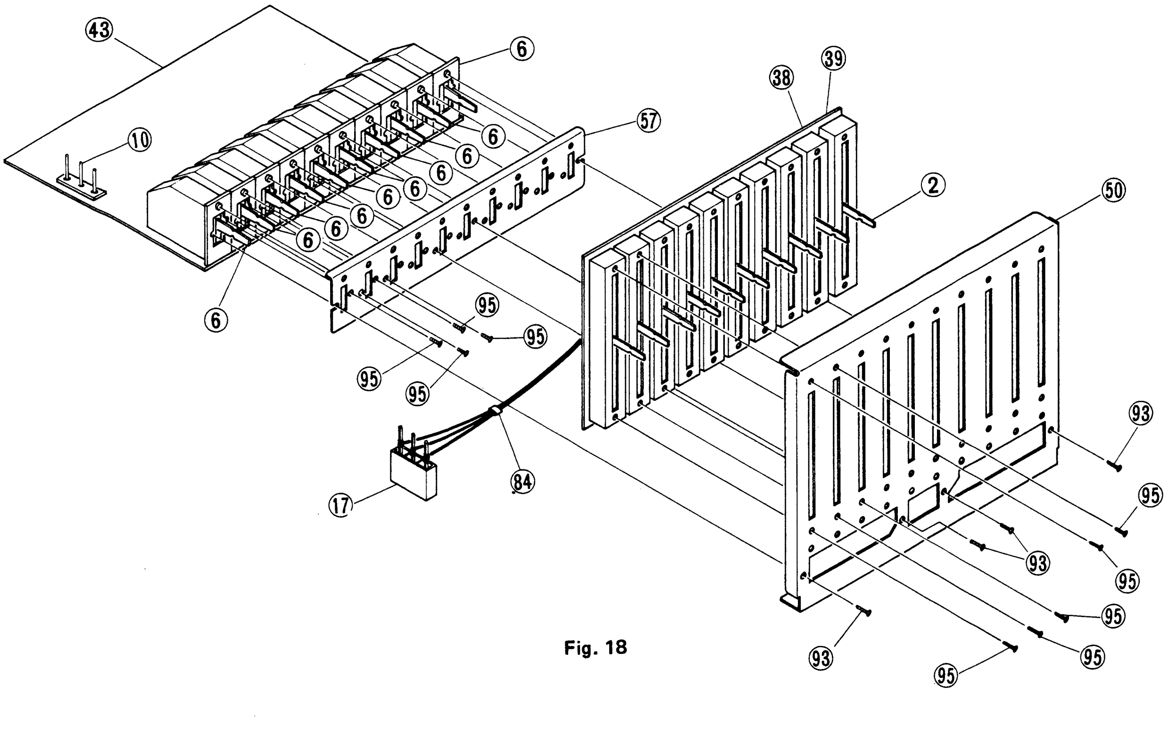

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Fig. 18

Parts List

Item No.	Part Number	Description	Remarks
2	QVT6C2W-8F5	Slide Variable Resistor	S.E.A. Control, Additional S.E.A. Control
6	QSL2310-001E	Lever Switch	S.E.A. Center Frequency Selector (± 1/3 oct.)
10	E03628-3	3-pin Plug	
15	E03706-012	12-pin Connector	Male type
16	E03707-012	"	Female Type
17	E03565-3BO	3-pin Socket	For internal wiring
31	E10164-001B	Circuit Board	Tape Switching P.C. Board Ass'y
32	E10164-001C	"	S.E.A. System Switching P.C. Board Ass'y
33	E10164-001A	"	Level Control P.C. Board Ass'y
37	E22314-001B	"	Additional Control Frequency Switching P.C. Board Ass'y
38	E34790-001	"	S.E.A. Control P.C. Board Ass'y (Left channel)
39	E34790-001	"	" " (Right channel)
40	E34792-001	"	Additional Control Semiconductor-Inductor P.C. Board Ass'y
43	E22227-001	"	Semiconductor-Inductor P.C. Board Ass'y
49	E10141-001	Chassis Base	
50	E34784-001	Bracket	To support TAC-430A, B P.C. Board Ass'y
51	E34785-001	Stay Bracket	Left side
52	E34786-001	"	Right side
54	E61428-001	Bracket	To support TAC-427, TAC-428 P.C. Board Ass'y
55	E61429-001	"	To support TAS-27, TAC-431, TAC-435 P.C. Board Ass'y
56	E61596-001	"	To support TAC-435 P.C. Board Ass'y
57	E61430-001	"	To support Lever Switches
58	E61431-001	"	To support TAC-431 P.C. Board Ass'y
62	E33966-18	Felt Spacer	For S.E.A. Control
63	E33966-19	"	For Additional S.E.A. Control
64	E33966-20	"	For 1/3 Oct. Frequency Switch
65	E33966-21	"	For Power Switch
66	E33966-22	"	For Tape Switches
67	E3400-319	Spacer	
79	E22447-002	Front Panel Ass'y	
84	E33754-001	Tie Band	For neeting wires
87	SBSB3006M	Screw	
88	SBSB3008M	"	
93	SSSB3006N	"	
95	SSSP3006N	"	
101	E60133-001	Special Screw	

5-(3) S.E.A. Amp. & Power Supply P.C. Board Ass'y

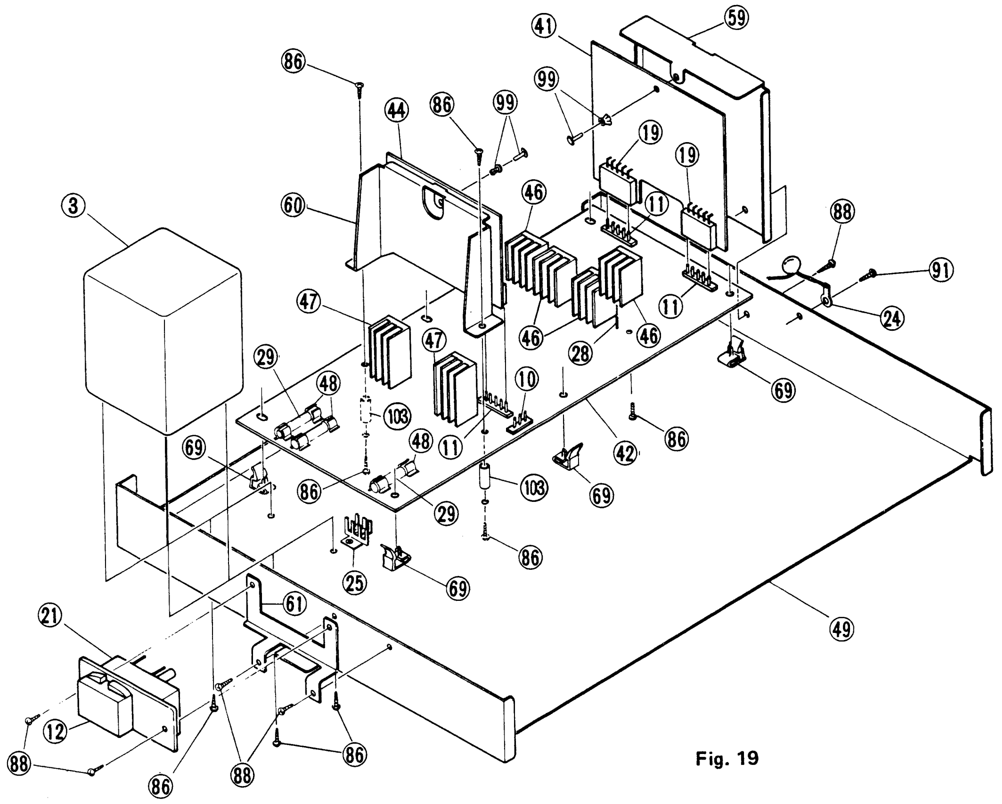


Fig. 19

Parts List

Item No.	Part Number	Description	Remarks
3	E03164-21	Power Transformer	
10	E03628-3	3-pin Plug	
11	E03628-5	5-pin Plug	
12	E03676-001	Voltage Selector Plug	For other than Europe, U.K. and Australia
19	E03565-5BO	5-pin Socket	
21	E03676-002	Voltage Selector Socket	For other than Europe, U.K. and Australia
24	52868-3	Terminal	
25	E46651-001	Ground Terminal	For internal grounding
29	QMF61U1-R80	Fuse	For other than Europe and U.K.
29	QMF51A2-R80	"	For Europe and U.K.
41	E34956-001	Circuit Board	TAC-460 Buffer Amp. P.C. Board Ass'y
42	E10142-001	"	TAP-266 S.E.A. Amp. & Power Supply P.C. Board Ass'y
44	E34957-002	"	TAS-28 Relay Switch P.C. Board Ass'y
46	E61537-001	Heat Sink	For X119 – X122
47	E61537-002	"	For X603, X604
48	E45524-001	Contact Clip	Fuse Clip
49	E10141-001	Chassis Base	
59	E34950-001	Circuit Board Holder	For TAC-460 Buffer Amp. P.C. Board Ass'y
60	E61652-001	"	For TAS-28 Relay Switch P.C. Board Ass'y
61	E60881-002	Voltage Selector Holder	For other than Europe, U.K. and Australia
69	E22561-001	Fastener	To mount TAP-266 P.C. Board Ass'y
86	LPSP3008MS	Screw	
88	SBSB3008M	"	
91	SDSB3008N		
99	E61729-001	Plastic Rivet	
103	E44182-022	Stud	

5-(4) Additional Control Panel

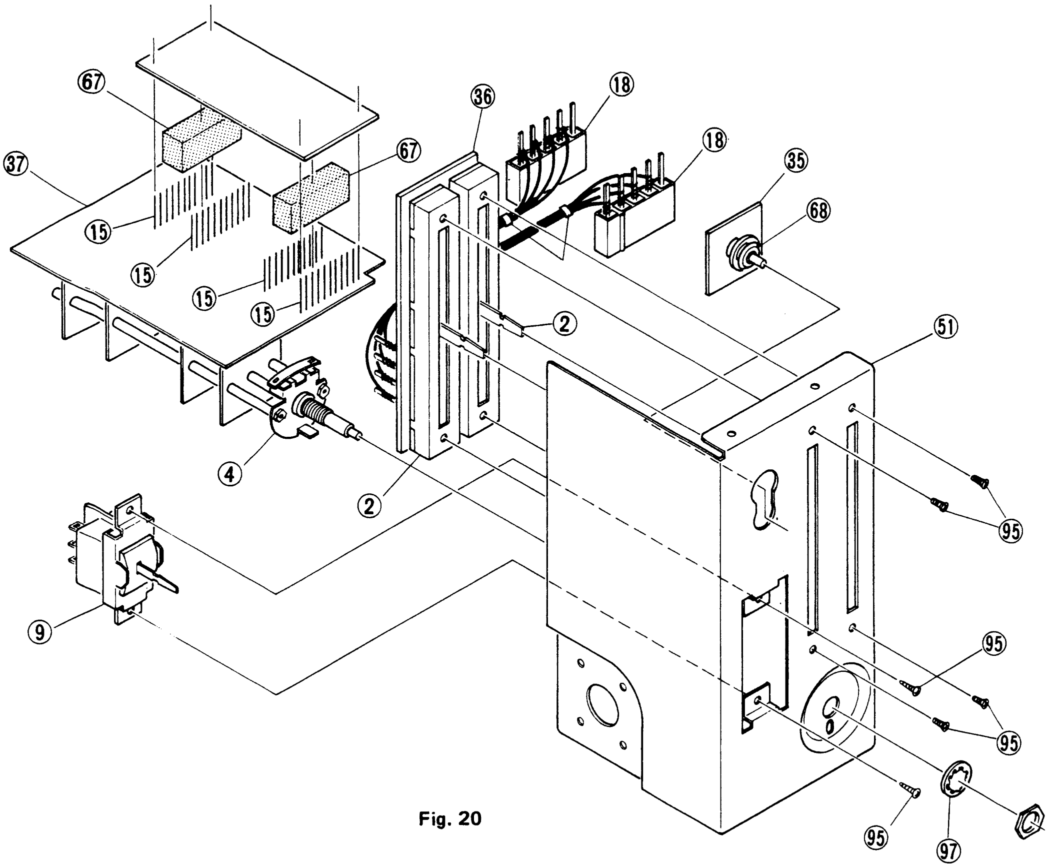


Fig. 20

Parts List

Item No.	Part Number	Description	Remarks
2	QVT6C2W-8F5	Slide Variable Resistor	Additional S.E.A. Control
4	QSR0076-001	Rotary Switch	Additional S.E.A. Control Frequency Select Switch
9	QSL2235-043	Power Switch	UL
9	QSL2235-044	"	SEMKO
15	E03706-012	12-pin Connector	
18	E03565-5BO	5-pin Socket	
35	E10164-001D	Circuit Board	TPS-92 LED P.C. Board Ass'y
36	E22314-001A	"	Additional S.E.A. Control P.C. Board Ass'y
37	E22314-001B	"	Additional S.E.A. Control Frequency Switching P.C. Board Ass'y
51	E34786-001	Stay Bracket	Left Side
67	E3400-319	Spacer	
68	E61338-001	Bushing	LED
95	SSSP3006NS	Screw	
97	WSB6000N	Lock Washer	

5-(5) Sub Control Panel

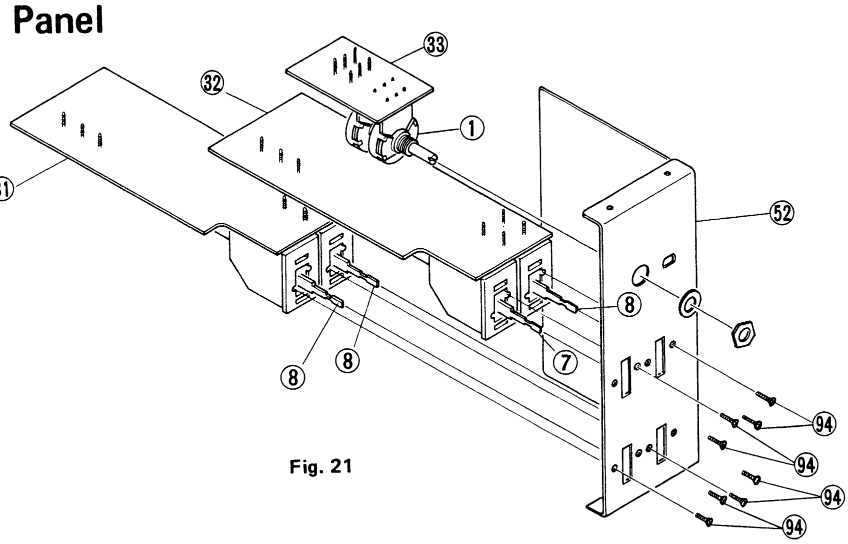


Fig. 21

Parts List

Item No.	Part Number	Description	Remarks
1	EVC4A2A-454	Variable Resistor	Level Control
7	QSL8210-001E	Lever Switch	Control Range Switch
8	QSL8310-001E	"	Tape Dubbing Switch, Tape Monitor Switch, S.E.A. System Switch
31	E10164-001B	Circuit Board	Tape Switching P.C. Board Ass'y
32	E10164-001C	"	S.E.A. System Switching P.C. Board Ass'y
33	E10164-001A	"	Level Control P.C. Board Ass'y
52	E34786-001	Stay Bracket	Right Side
94	SPSP3008NS	Screw	

5-(6) Bottom Plate

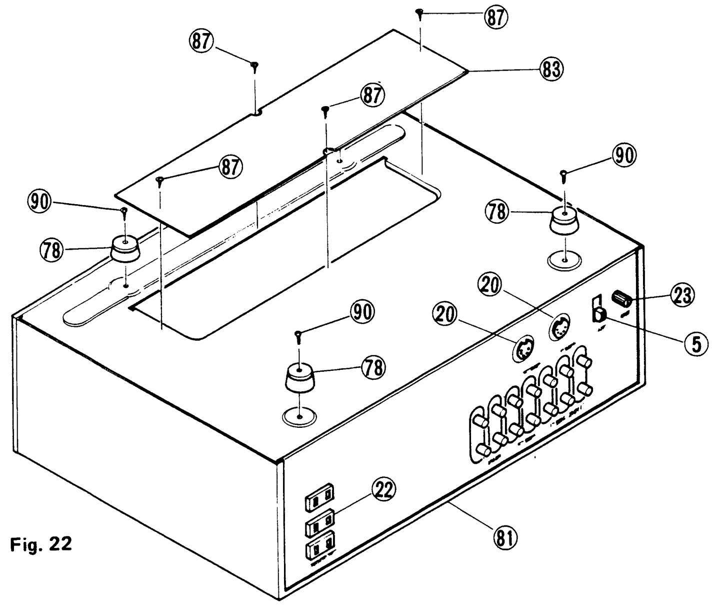


Fig. 22

Parts List

Item No.	Part Number	Description	Remarks
5	QSS2301-003	Slide Switch	S.E.A. Input Attenuator Switch
20	E03623-002	DIN Socket	DIN Tape Terminal
22	QMC0637-001	AC Outlet	Other than Europe, U.K. and Australia
23	E03619-001	Ground Terminal Ass'y	
78	E47227-008	Foot Ass'y	
81	E22214-001	Rear Panel	
83	E34789-001	Bottom Plate	
87	SBSB3006M	Screw	
90	SBSB3012Z	"	

5-(7) Rear Panel

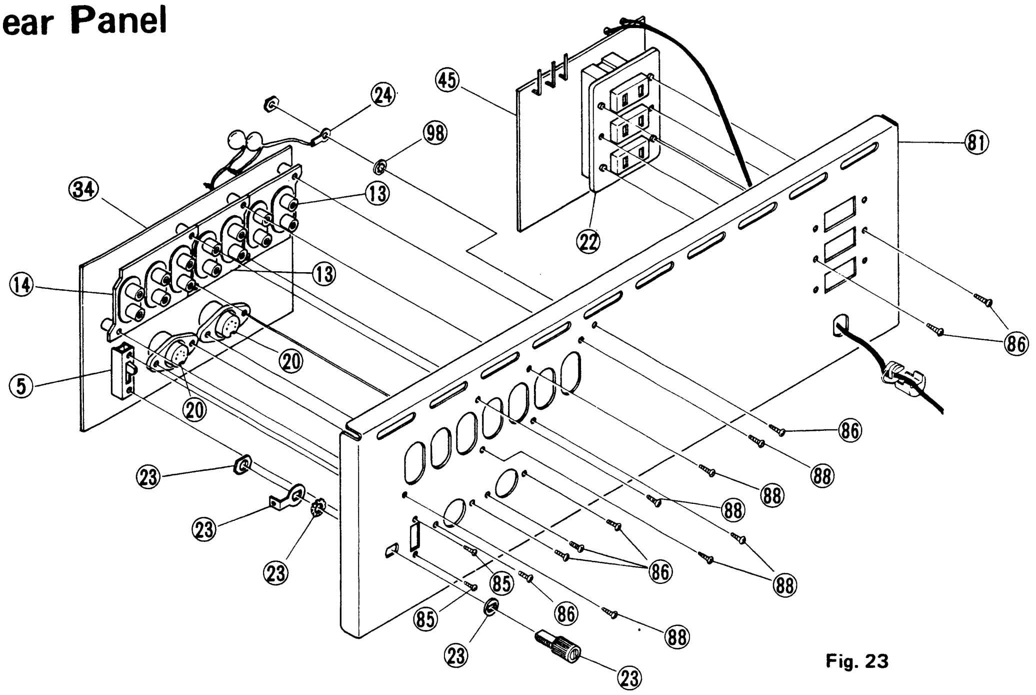


Fig. 23

Parts List

Item No.	Part Number	Description	Remarks
5	QSS2301-003	Slide Switch	S.E.A. Input Attenuator Switch
13	E03591-40D	Pin Jack Ass'y	Output Terminal, Tape-2 Terminal
14	E03591-60D	"	Input & Tape-1 Terminal
20	E03623-002	DIN Socket	DIN Tape Terminal
22	QMC0637-001	AC Outlet	Other than Europe, U.K. and Australia
23	E03619-001	Ground Terminal Ass'y	
24	52868-3	Terminal	
34	E10164-001D	Circuit Board	TSC-72 Pin Jack Terminal P.C. Board Ass'y
45	E34792-001	"	TPS-80 AC Socket P.C. Board Ass'y Other than Europe, U.K. and Australia
81	E22214-001	Rear Panel	
85	LPSP2605MS	Screw	To fix DIN Socket
86	LPSP3008MS	"	
98	WAS3000N	Lock Washer	

6. Adjustment Procedure

Gain adjustment

- Confirm the following items before adjustment.
  1) The input attenuator switch on the rear panel should be set at 0 dB.
  2) The S.E.A. control knobs should be set at the 0 dB (FLAT) click-stop positions.
  3) Set the CONTROL RANGE select switch to "± 12 dB".
     Set the TAPE DUBBING switch to "SOURCE".
     Set the TAPE MONITOR switch to "REC SOURCE".

Adjustment procedure

1) Apply a signal of 1 kHz/0 dBm = 0.775 V to the INPUT terminals.
2) Read the output level at the FIXED OUTPUT terminals on V.T.V.M.
3) Set the SEA SYSTEM switch to "DEFEAT" and confirm that the output level is 0 dB. Then shift the switch to "NORM" and adjust VR101 and VR102 until the output level reaches 0 dBm.
4) Repeat shifting the switch between "DEFEAT" and "NORM" and adjust carefully until the V.T.V.M. indicator no longer deflects.

Note:
Momentary deflection of the indicator at the time of switching is allowable.

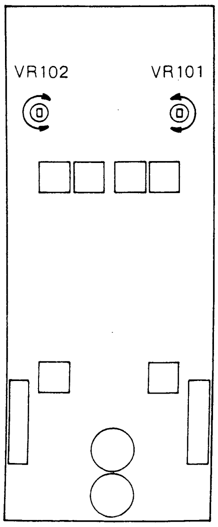


Fig. 24
TAP-266A P.C. Board Ass'y

7. Removal of Printed Circuit Board Assemblies

7-(1) TAP-266A S.E.A. Amp. & Power Supply P.C. Board Ass'y

Remove the 2 screws, securing the stud, from the bottom of the chassis. Pull the Buffer Amp. P.C. Board Ass'y (TAC-460) and Relay Switch P.C. Board Ass'y (TAC-28) up and out. Next, pull out all sockets (5-pin, 3-pin) connected to TAP-266A.
Then remove TAP-266A from the fasteners.

7-(2) TAC-431 Additional Semiconductor "L" P.C. Board Ass'y

Remove the 3 screws (A) shown in Fig. 25 and remove the shield cover. Remove the 5 screws (B) and pull out the 4 sockets (5-pin).
Then remove TAC-431.

7-(3) TAC-432 Additional Control P.C. Board Ass'y

After removing the front panel and shield cover, remove the 4 screws (C) then remove TAC-432.

7-(4) TAC-435 Additional Control Frequency Switching P.C. Board Ass'y

After removing the front panel, shield cover and TAC-431, remove the 2 screws (D) and nut (E), then remove TAC-435.

7-(5) TPS-92 LED P.C. Board Ass'y

After removing the front panel, slide the bushing protecting the LED upward and pull TPS-92 back and out.

Note:
When pulling TPS-92, be sure to hold the plastic end of the LED and rubber bushing. Pulling the assembly out by itself plases a strain on the lead wire, which may results in a disconnected LED.

7-(6) TAS-27 & TAC-430 Semiconductor "L" P.C. Board Ass'y and S.E.A. Control P.C. Board Ass'y

First remove the front panel, shield cover, TAC-431. 1 screw (D) (front side) and 2 screws (G). Next, remove the 4 screws (H), then remove TAS-27 and 20 screws (I) and TAC-430.

7-(7) TAC-428 S.E.A. System Switching P.C. Board Ass'y

After removing the front panel, remove 1 screw (J) and 4 screws (K), then remove TAC-428.

7-(8) TAC-427 Tape Switching P.C. Board Ass'y

After removing the front panel, remove 2 screws (J, L) and 4 screws (M) then remove TAC-427.

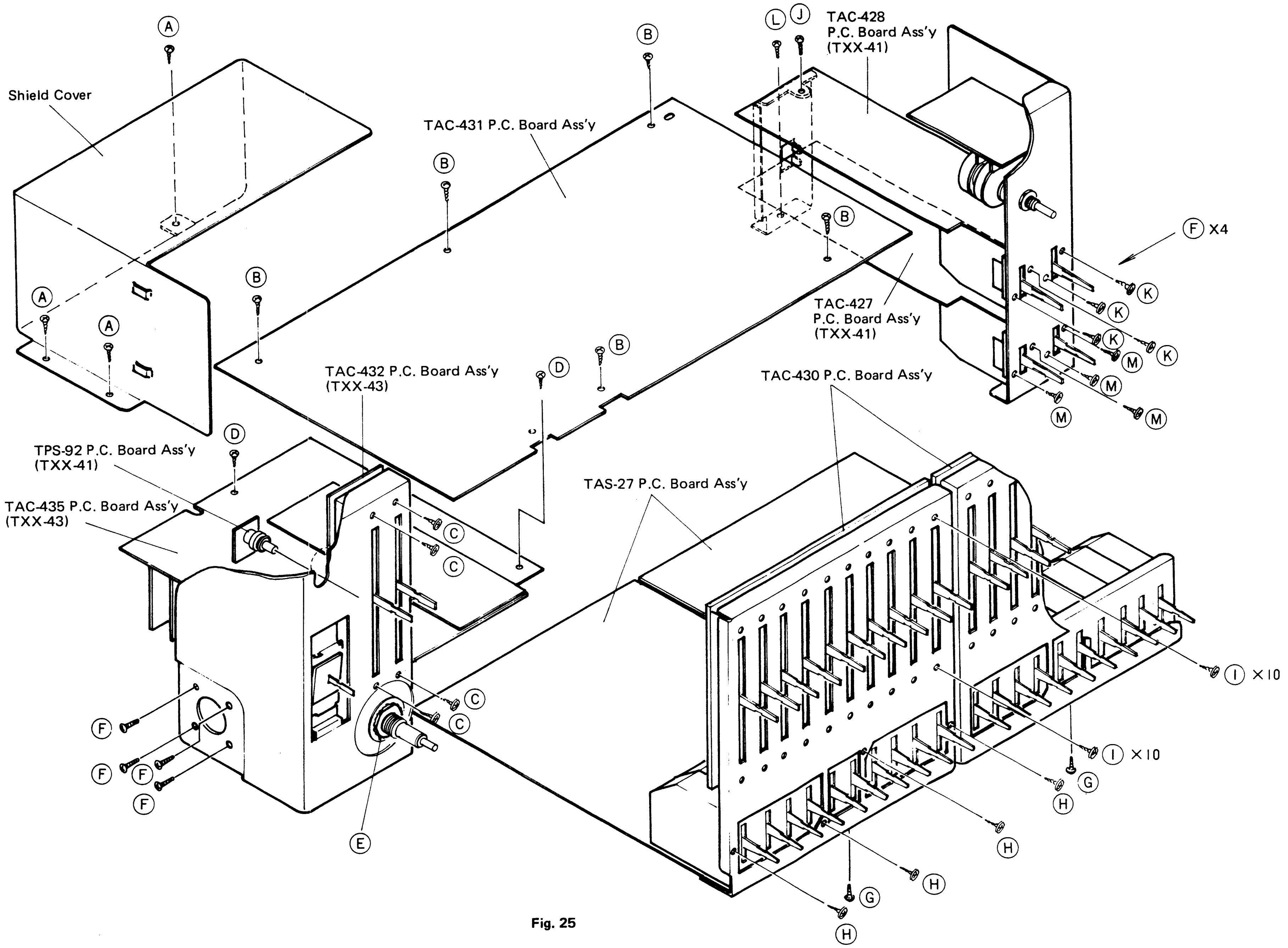

Ⓐ
Shield Cover
Ⓑ
TAC-431 P.C. Board Ass'y
Ⓛ Ⓙ
TAC-428
P.C. Board Ass'y
(TXX-41)
Ⓕ X4
Ⓚ
Ⓜ
TAC-427
P.C. Board Ass'y
(TXX-41)
TAC-430 P.C. Board Ass'y
TAC-432 P.C. Board Ass'y
(TXX-43)
Ⓓ
TPS-92 P.C. Board Ass'y
(TXX-41)
TAC-435 P.C. Board Ass'y
(TXX-43)
Ⓒ
TAS-27 P.C. Board Ass'y
Ⓘ X10
Ⓘ X10
Ⓖ
Ⓗ
Ⓔ
Ⓕ

Fig. 25

8. Wiring Diagrams of All P.C. Board Assemblies

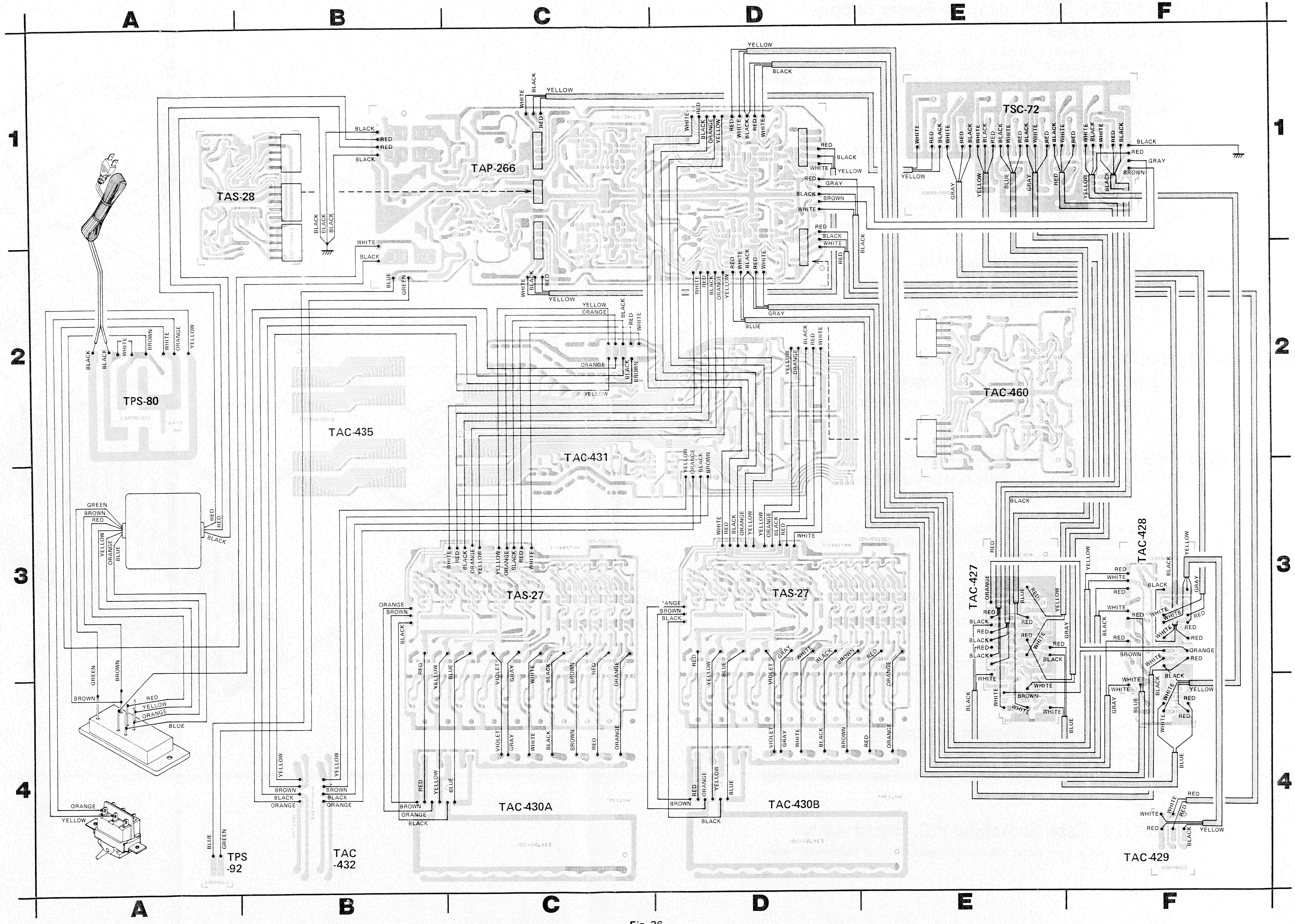

A
B
C
D
E
F
1
2
3
4
TAS-28
TAP-266
TSC-72
TPS-80
TAC-435
TAC-431
TAC-460
TAS-27
TAS-27
TAC-427
TAC-428
TAC-430A
TAC-430B
TAC-429
TPS-92
TAC-432

Fig. 26

9. Printed Circuit Board Ass'y and Parts List

9-(1) TAS-27 Semiconductor "L" P.C. Board Ass'y

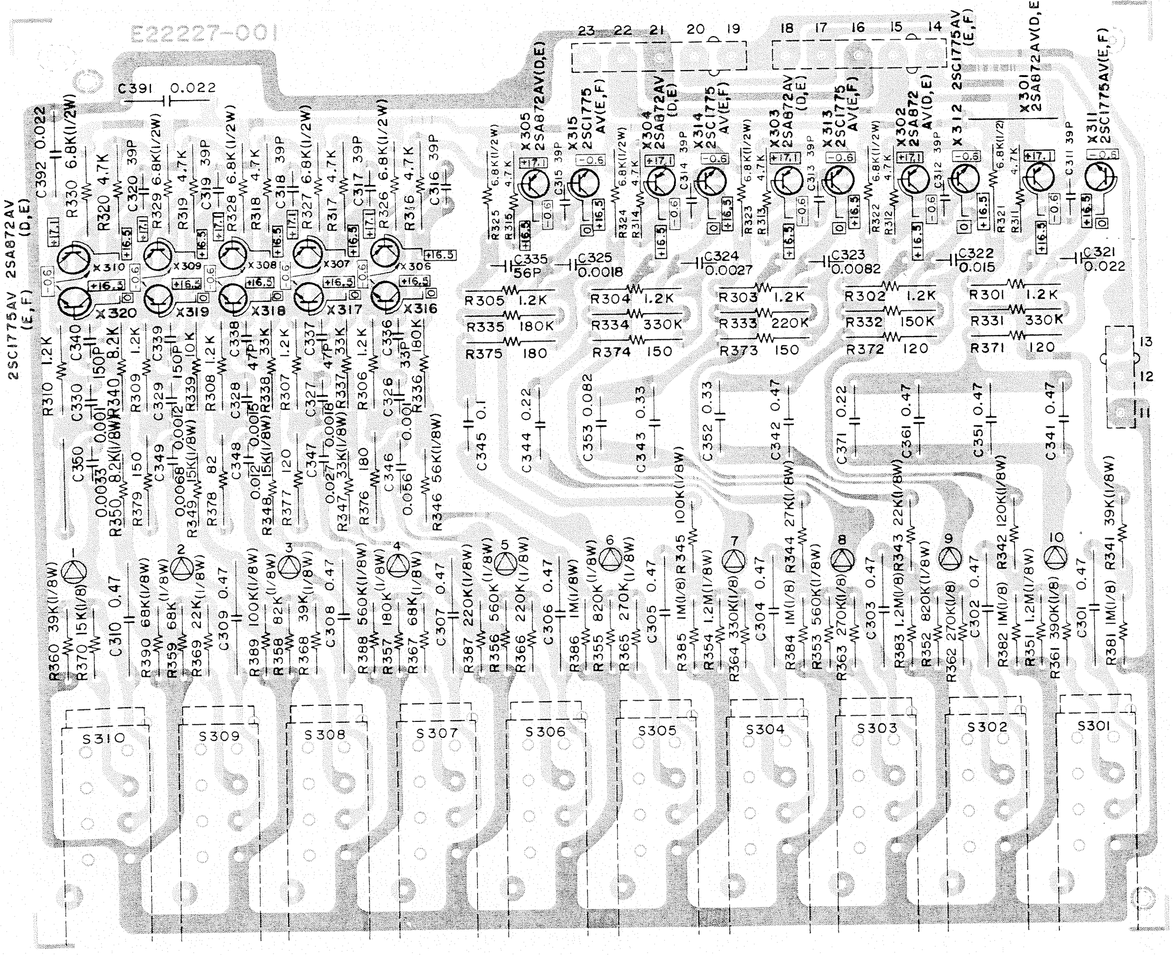

E22227-001
C391 0.022
23 22 21 20 19
18 17 16 15 14
X301 2SA872AV(D,E)
X311 2SC1775AV(E,F)
X302 2SA872AV(D,E)
X312 2SC1775AV(E,F)
X303 2SA872AV(D,E)
X313 2SC1775AV(E,F)
X304 2SA872AV(D,E)
X314 2SC1775AV(E,F)
X305 2SA872AV(D,E)
X315 2SC1775AV(E,F)
2SC1775AV 2SA872AV (E,F) (D,E)
X306 X307 X308 X309 X310
X316 X317 X318 X319 X320
C392 0.022
R330 6.8K(1/2W)
R320 4.7K
C320 39P
R329 6.8K(1/2W)
R319 4.7K
C319 39P
R328 6.8K(1/2W)
R318 4.7K
C318 39P
R327 6.8K(1/2W)
R317 4.7K
C317 39P
R326 6.8K(1/2W)
R316 4.7K
C316 39P
C335 56P
C325 0.0018
C324 0.0027
C323 0.0082
C322 0.015
C321 0.022
R305 1.2K
R335 180K
R375 180
R304 1.2K
R334 330K
R374 150
R303 1.2K
R333 220K
R373 150
R302 1.2K
R332 150K
R372 120
R301 1.2K
R331 330K
R371 120
C345 0.1
C344 0.22
C353 0.082
C343 0.33
C352 0.33
C342 0.47
C371 0.22
C361 0.47
C351 0.47
C341 0.47
R310 1.2K
C330 0.001
C340 150P
R340 8.2K
C350 0.0033
R350 8.2K(1/8W)
R309 1.2K
C329 0.0012
C339 150P
R339 10K
C349 0.0068
R349 15K(1/8W)
R379 150
R308 1.2K
C328 0.0015
C338 47P
R338 33K
C348 0.012
R348 15K(1/8W)
R378 82
R307 1.2K
C327 0.0018
C337 47P
R337 33K(1/8W)
C347 0.027
R347 33K(1/8W)
R377 120
R306 1.2K
C326 0.001
C336 33P
R336 180K
C346 0.056
R346 56K(1/8W)
R376 180
R345 100K(1/8W)
R344 27K(1/8W)
R343 22K(1/8W)
R342 120K(1/8W)
R341 39K(1/8W)
R360 39K(1/8W)
R370 15K(1/8W)
C310 0.47
R390 68K(1/8W)
R359 68K(1/8W)
R369 22K(1/8W)
C309 0.47
R389 100K(1/8W)
R358 82K(1/8W)
R368 39K(1/8W)
C308 0.47
R388 560K(1/8W)
R357 180K(1/8W)
R367 68K(1/8W)
C307 0.47
R387 220K(1/8W)
R356 560K(1/8W)
R366 220K(1/8W)
C306 0.47
R386 1M(1/8W)
R355 820K(1/8W)
R365 270K(1/8W)
C305 0.47
R385 1M(1/8W)
R354 1.2M(1/8W)
R364 330K(1/8W)
C304 0.47
R384 1M(1/8)
R353 560K(1/8W)
R363 270K(1/8)
C303 0.47
R383 1.2M(1/8)
R352 820K(1/8W)
R362 270K(1/8)
C302 0.47
R382 1M(1/8)
R351 1.2M(1/8)
R361 390K(1/8W)
C301 0.47
R381 1M(1/8)
1 2 3 4 5 6 7 8 9 10
11 12 13
+17.1 +16.5 -0.6
S310 S309 S308 S307 S306 S305 S304 S303 S302 S301

Fig. 27

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X301	2SA872AV (D, E)	300 mW	200 MHz	Silicon	Hitachi
X302	2SA872AV (D, E)	〃	〃	〃	〃
X303	2SA872AV (D, E)	〃	〃	〃	〃
X304	2SA872AV (D, E)	〃	〃	〃	〃
X305	2SA872AV (D, E)	〃	〃	〃	〃
X306	2SA872AV (D, E)	〃	〃	〃	〃
X307	2SA872AV (D, E)	〃	〃	〃	〃
X308	2SA872AV (D, E)	〃	〃	〃	〃
X309	2SA872AV (D, E)	〃	〃	〃	〃
X310	2SA872AV (D, E)	〃	〃	〃	〃
X311	2SC1775AV (E, F)	〃	〃	〃	〃
X312	2SC1775AV (E, F)	〃	〃	〃	〃
X313	2SC1775AV (E, F)	〃	〃	〃	〃
X314	2SC1775AV (E, F)	〃	〃	〃	〃
X315	2SC1775AV (E, F)	〃	〃	〃	〃
X316	2SC1775AV (E, F)	〃	〃	〃	〃
X317	2SC1775AV (E, F)	〃	〃	〃	〃
X318	2SC1775AV (E, F)	〃	〃	〃	〃
X319	2SC1775AV (E, F)	〃	〃	〃	〃
X320	2SC1775AV (E, F)	〃	〃	〃	〃

Capacitors

Item No.	Part Number	Rating		Description
C301	QFH42AK-474	0.47 μF	100 V	Metalized Film
C302	QFH42AK-474	〃	〃	〃
C303	QFH42AK-474	〃	〃	〃
C304	QFH42AK-474	〃	〃	〃
C305	QFH42AK-474	〃	〃	〃
C306	QFH42AK-474	〃	〃	〃
C307	QFH42AK-474	〃	〃	〃
C308	QFH42AK-474	〃	〃	〃
C309	QFH42AK-474	〃	〃	〃
C310	QFH42AK-474	〃	〃	〃
C311	QCS11HJ-390	39 pF	50 V	Ceramic
C312	QCS11HJ-390	〃	〃	〃
C313	QCS11HJ-390	〃	〃	〃
C314	QCS11HJ-390	〃	〃	〃
C315	QCS11HJ-390	〃	〃	〃
C316	QCS11HJ-390	〃	〃	〃
C317	QCS11HJ-390	〃	〃	〃
C318	QCS11HJ-390	〃	〃	〃
C319	QCS11HJ-390	〃	〃	〃
C320	QCS11HJ-390	〃	〃	〃
C321	QFM31HJ-223N	0.022 μF	〃	Mylar
C322	QFM31HJ-153N	0.015 μF	〃	〃
C323	QFM31HJ-822N	0.0082 μF	〃	〃
C324	QFM31HJ-272N	0.0027 μF	〃	〃
C325	QFM31HJ-182N	0.0018 μF	〃	〃
C326	QFM31HJ-102N	0.001 μF	〃	〃
C327	QFM31HJ-182N	0.0018 μF	〃	〃
C328	QFM31HJ-152N	0.0015 μF	〃	〃
C329	QFM31HJ-122N	0.0012 μF	〃	〃
C330	QFM31HJ-102N	0.001 μF	〃	〃
C335	QCS11HJ-560	56 pF	〃	Ceramic
C336	QCS11HJ-330	33 pF	〃	〃
C337	QCS11HJ-470	47 pF	〃	〃
C338	QCS11HJ-470	〃	〃	〃
C339	QCS11HJ-151	150 pF	〃	〃
C340	QCS11HJ-151	〃	〃	〃
C341	QFM31HJ-474N	0.47 μF	〃	Mylar
C342	QFM31HJ-474N	〃	〃	〃
C343	QFM31HJ-334N	0.33 μF	〃	〃
C344	QFM31HJ-224N	0.22 μF	〃	〃
C345	QFM31HJ-104N	0.1 μF	〃	〃
C346	QFM31HJ-563N	0.056 μF	〃	〃
C347	QFM31HJ-273N	0.027 μF	〃	〃
C348	QFM31HJ-123N	0.012 μF	〃	〃
C349	QFM31HJ-682N	0.0068 μF	〃	〃
C350	QFM31HJ-332N	0.0033 μF	〃	〃
C351	QFM31HJ-474N	0.47 μF	〃	〃
C352	QFM31HJ-334N	0.33 μF	〃	〃
C353	QFM31HJ-823N	0.082 μF	〃	〃
C361	QFM31HJ-474N	0.47 μF	〃	〃
C371	QFM31HJ-224N	0.22 μF	〃	〃
C391	QFZ0072-223	0.022 μF	600 V	Metalized Film
C392	QFZ0072-223	〃	〃	〃

Resistors

Item No.	Part Number	Rating		Description
R301	QRD141J-122	1.2 kΩ	1/4 W	Carbon
R302	QRD141J-122	"	"	"
R303	QRD141J-122	"	"	"
R304	QRD141J-122	"	"	"
R305	QRD141J-122	"	"	"
R306	QRD141J-122	"	"	"
R307	QRD141J-122	"	"	"
R308	QRD141J-122	"	"	"
R309	QRD141J-122	"	"	"
R310	QRD141J-122	"	"	"
R311	QRD141J-472	4.7 kΩ	"	"
R312	QRD141J-472	"	"	"
R313	QRD141J-472	"	"	"
R314	QRD141J-472	"	"	"
R315	QRD141J-472	"	"	"
R316	QRD141J-472	"	"	"
R317	QRD141J-472	"	"	"
R318	QRD141J-472	"	"	"
R319	QRD141J-472	"	"	"
R320	QRD141J-472	"	"	"
R321	QRD126J-682	6.8 kΩ	1/2 W	Uninflammable Carbon
R322	QRD126J-682	"	"	"
R323	QRD126J-682	"	"	"
R324	QRD126J-682	"	"	"
R325	QRD126J-682	"	"	"
R326	QRD126J-682	"	"	"
R327	QRD126J-682	"	"	"
R328	QRD126J-682	"	"	"
R329	QRD126J-682	"	"	"
R330	QRD126J-682	"	"	"
R331	QRD141J-334	330 kΩ	1/4 W	Carbon
R332	QRD141J-154	150 kΩ	"	"
R333	QRD141J-224	220 kΩ	"	"
R334	QRD141J-334	330 kΩ	"	"
R335	QRD141J-184	180 kΩ	"	"
R336	QRD141J-184	"	"	"
R337	QRD141J-333	33 kΩ	"	"
R338	QRD141J-333	"	"	"
R339	QRD141J-103	10 kΩ	"	"
R340	QRD141J-822	8.2 kΩ	"	"
R341	QRD181J-393	39 kΩ	1/8 W	"
R342	QRD181J-124	120 kΩ	"	"
R343	QRD181J-223	22 kΩ	"	"
R344	QRD181J-273	27 kΩ	"	"
R345	QRD181J-104	100 kΩ	"	"
R346	QRD181J-563	56 kΩ	"	"
R347	QRD181J-333	33 kΩ	"	"
R348	QRD181J-153	15 kΩ	"	"
R349	QRD181J-153	"	"	"
R350	QRD181J-822	8.2 kΩ	"	"
R351	QRD181J-125	1.2 MΩ	"	"
R352	QRD181J-824	820 kΩ	"	"
R353	QRD181J-564	560 kΩ	"	"
R354	QRD181J-125	1.2 MΩ	"	"
R355	QRD181J-824	820 kΩ	"	"
R356	QRD181J-564	560 kΩ	"	"

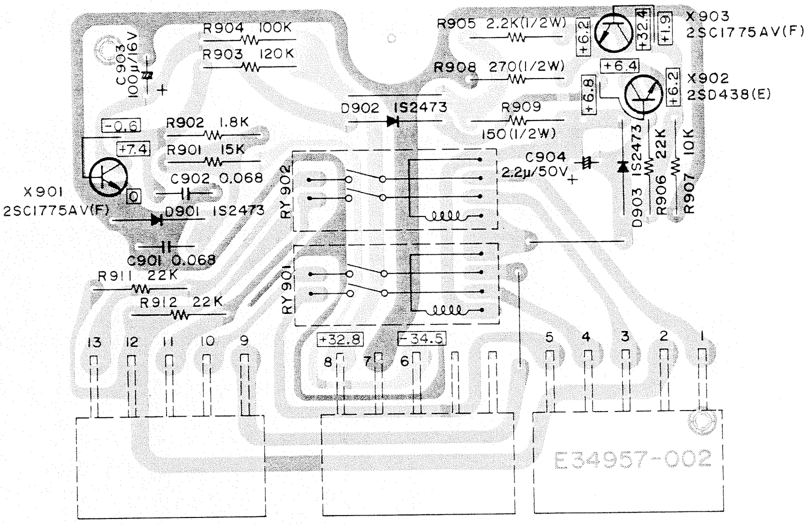
Resistors

Item No.	Part Number	Rating		Description
R357	QRD181J-184	180 kΩ	1/8 W	Carbon
R358	QRD181J-823	82 kΩ	″	″
R359	QRD181J-683	68 kΩ	″	″
R360	QRD181J-393	39 kΩ	″	″
R361	QRD181J-394	390 kΩ	″	″
R362	QRD181J-274	270 kΩ	″	″
R363	QRD181J-274	″	″	″
R364	QRD181J-274	″	″	″
R365	QRD181J-274	″	″	″
R366	QRD181J-224	220 kΩ	″	″
R367	QRD181J-683	68 kΩ	″	″
R368	QRD181J-393	39 kΩ	″	″
R369	QRD181J-223	22 kΩ	″	″
R370	QRD181J-153	150 kΩ	″	″
R371	QRD141J-121	120 Ω	1/4 W	″
R372	QRD141J-121	″	″	″
R373	QRD141J-151	150 Ω	″	″
R374	QRD141J-151	″	″	″
R375	QRD141J-181	180 Ω	″	″
R376	QRD141J-181	″	″	″
R377	QRD141J-121	120 Ω	″	″
R378	QRD141J-820	82 Ω	″	″
R379	QRD141J-151	150 Ω	″	″
R380	QRD141J-0R0	0 Ω	–	–
R381	QRD181J-105	1 MΩ	1/8 W	Carbon
R382	QRD181J-105	″	″	″
R383	QRD181J-125	1.2 MΩ	″	″
R384	QRD181J-105	1 MΩ	″	″
R385	QRD181J-105	″	″	″
R386	QRD181J-105	″	″	″
R387	QRD181J-224	220 kΩ	″	″
R388	QRD181J-564	560 kΩ	″	″
R389	QRD181J-104	100 kΩ	″	″
R390	QRD181J-683	68 kΩ	″	″

Others

Item No.	Part Number	Rating	Description
	E22227-001		Circuit Board
	E03628-5		5-pin Plug
	E03628-3		3-pin Plug
	E61430-001		L-shaped Bracket
	E43727-002		Terminal Strip for Wrapping Wiring
S301	QSL2310-001E		Lever Switch ± 1/3 oct. Frequency Selector
S302	QSL2310-001E		″
S303	QSL2310-001E		″
S304	QSL2310-001E		″
S305	QSL2310-001E		″
S306	QSL2310-001E		″
S307	QSL2310-001E		″
S308	QSL2310-001E		″
S309	QSL2310-001E		″
S310	QSL2310-001E		″

9-(2) TAS-28 Relay Switch P.C. Board Ass'y



R904 100K
R903 120K
R905 2.2K(1/2W)
+6.2
+32.4
+1.9
X903
2SC1775AV(F)
C903
100µ/16V
R908 270(1/2W)
+6.4
+6.8
+6.2
X902
2SD438(E)
D902 1S2473
R909
150(1/2W)
-0.6
R902 1.8K
+7.4
R901 15K
C904
2.2µ/50V
D903 1S2473
R906 22K
R907 10K
C902 0.068
X901
2SC1775AV(F)
0
D901 1S2473
RY902
C901 0.068
R911 22K
R912 22K
RY901
13
12
11
10
9
+32.8
-34.5
8
7
6
5
4
3
2
1
E34957-002

Transistors

Item No.	Part Number	Rating		Description
		Pc	fT	
X901 X902 X903	2SC1775AV (F) 2SD438 (E) 2SC1775AV (F)	300 mW 750 mW 300 mW	200 MHz 100 MHz 200 MHz	Silicon '' ''

Diodes

Item No.	Part Number	Rating	Description	Maker
D901 D902 D903	1S2473 1S2473 1S2473		Silicon '' ''	Toyo Dengu

Capacitors

Item No.	Part Number	Rating		Description
C901 C902 C903 C904	QFM31HJ-683N QFM31HJ-683N QEW41CA-227 QEW41HA-225	0.068 µF '' 220 µF 2.2 µF	50 V '' 16 V 50 V	Mylar '' Electrolytic ''

Resistors

Item No.	Part Number	Rating		Description
R901 R902 R903 R904 R905	QRD141J-153 QRD141J-182 QRD141J-124 QRD141J-683 QRD126J-122	15 kΩ 1.8 kΩ 120 kΩ 68 kΩ 1.2 kΩ	1/4 W '' '' '' 1/2 W	Carbon '' '' '' Uninflammable Carbon
R906 R907 R908 R909 R911 R912	QRD141J-223 QRD141J-682 QRD126J-271 QRD126J-151 QRD141J-473 QRD141J-473	22 kΩ 6.8 kΩ 270 Ω 150 Ω 47 kΩ ''	1/4 W '' 1/2 W '' 1/4 W ''	Carbon '' Uninflammable Carbon '' Carbon ''

Others

Item No.	Part Number	Rating		Description
	E34957-002			Circuit Board
	E03565-5D			5-pin Socket
RY901	ESK2D24-211	24 V		Reed Relay
RY902	ESK2D24-211	''		''
	QRD141J-0R0			0 Ω Jump Wire

9-(3) TXX-41 Terminal Board and Switch P.C. Board Ass'y

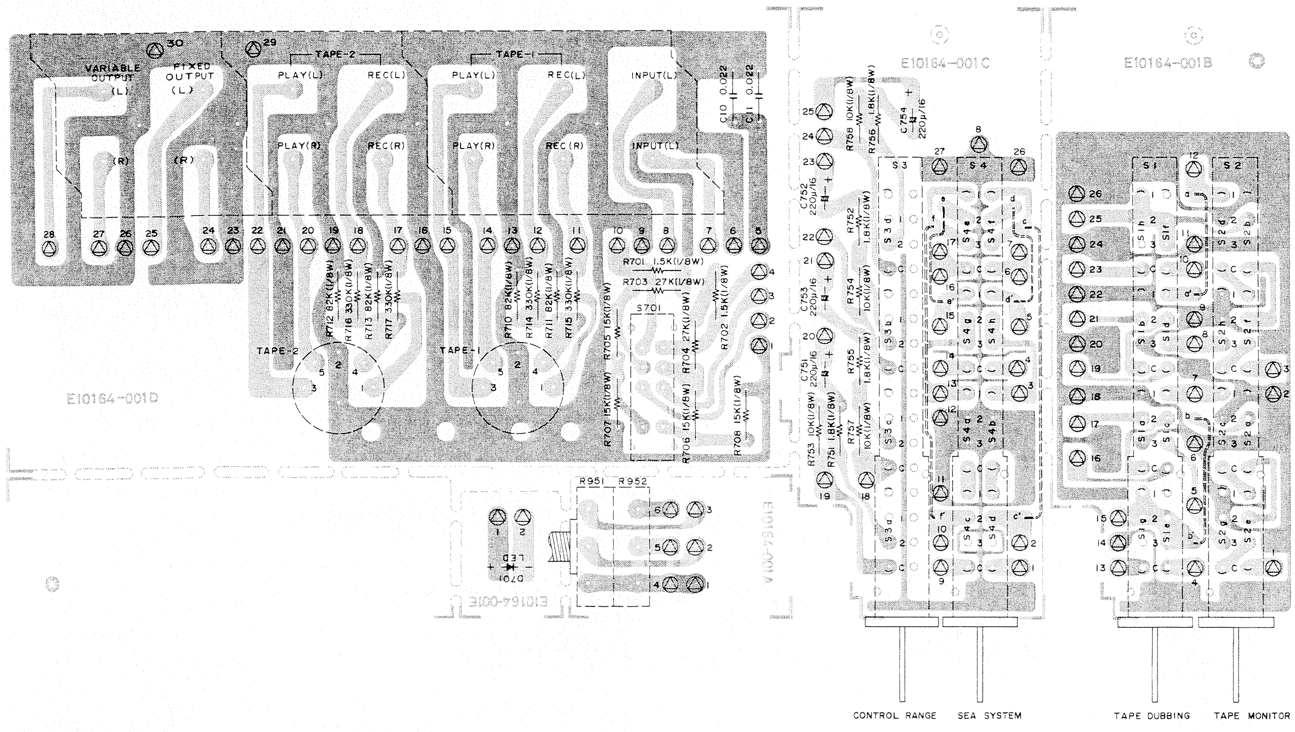

VARIABLE OUTPUT (L)
FIXED OUTPUT (L)
TAPE-2
TAPE-1
PLAY(L)
REC(L)
INPUT(L)
PLAY(R)
REC(R)
INPUT(L)
(R)
C10 0.022
C11 0.022
R701 1.5K(1/8W)
R703 27K(1/8W)
S701
R712 82K(1/8W)
R716 330K(1/8W)
R713 82K(1/8W)
R717 330K(1/8W)
R710 82K(1/8W)
R714 330K(1/8W)
R711 82K(1/8W)
R715 330K(1/8W)
R705 15K(1/8W)
R707 15K(1/8W)
R706 15K(1/8W)
R704 27K(1/8W)
R702 1.5K(1/8W)
R708 15K(1/8W)
E10164-001D
E10164-001C
E10164-001B
E10164-001E
E10164-001A
R951
R952
D701
LED
R758 10K(1/8W)
R756 1.8K(1/8W)
C754 220μ/16
C752 220μ/16
R752 1.8K(1/8W)
C753 220μ/16
R754 10K(1/8W)
C751 220μ/16
R755 1.8K(1/8W)
R753 10K(1/8W)
R751 1.8K(1/8W)
R757 10K(1/8W)
S3
S4
S1
S2
CONTROL RANGE
SEA SYSTEM
TAPE DUBBING
TAPE MONITOR

Fig. 29

Diode

Item No.	Part Number	Rating	Description
D 701	GD4-203SRD		LED

Capacitors

Item No.	Part Number	Rating		Description
C10	QCF11HP-223	0.022 μF	50 V	Ceramic
C11	QCF11HP-223	〃	〃	〃
C751	QEW41CA-227	220 μF	16 V	Electrolytic
C752	QEW41CA-227	〃	〃	〃
C753	QEW41CA-227	〃	〃	〃
C754	QEW41CA-227	〃	〃	〃

Resistors

Item No.	Part Number	Rating		Description
R701	QRD181J-152	1.5 kΩ	1/8 W	
R702	QRD181J-152	〃	〃	
R703	QRD181J-273	27 kΩ	〃	
R704	QRD181J-273	〃	〃	
R705	QRD181J-153	15 kΩ	〃	
R706	QRD181J-153	〃	〃	
R707	QRD181J-153	〃	〃	
R708	QRD181J-153	〃	〃	
R710	QRD181J-104	100 kΩ	〃	
R711	QRD181J-104	〃	〃	
R712	QRD181J-104	〃	〃	
R713	QRD181J-104	〃	〃	
R714	QRD181J-334	330 kΩ	〃	
R715	QRD181J-334	〃	〃	
R716	QRD181J-334	〃	〃	
R717	QRD181J-334	〃	〃	

Others

Item No.	Part Number	Rating	Description
	E10164-001		Circuit Board
R951, 952	EVC4A2A-454		Variable Resistor for Level Control
S1	QSL8310-001E		Lever Switch for Dubbing
S2	QSL8310-001E		Lever Switch for Monitor
S3	QSL8210-001E		Lever Switch for Control Range
S4	QSL8310-001E		Lever Switch for S.E.A. System
	E61338-001		Bushing for LED
	E46687-001		Terminal Strip for Wrapping Wiring
	E03623-002		DIN Socket for Tape
S701	QSS2301-003		Slide Switch for ATT
	E03591-60D		Pin Jack Ass'y
	E03591-40D		″

9-(4) TXX-43 Frequency Switching P.C. Board Ass'y

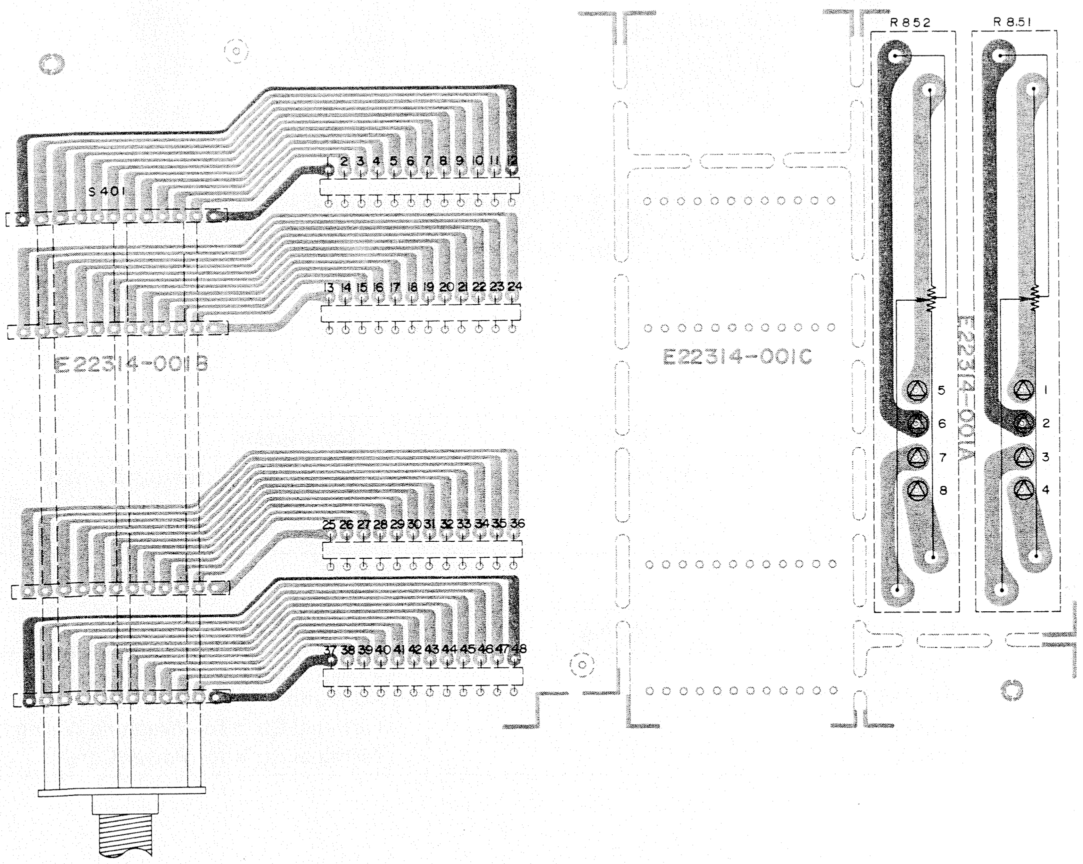

S401
2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17 18 19 20 21 22 23 24
E22314-001B
25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45 46 47 48
E22314-001C
R852
R851
E22314-001A
1
2
3
4
5
6
7
8

Fig. 30

Others

Item No.	Part Number	Rating	Description
	E22314-001		Circuit Board
R851	QVT6C2W-8F5		Slide Volume Resistor
R852	QVT6C2W-8F5		″
S401	QSR0076-001		Rotary Switch
	E03706-012		12-pin Connector (male type)
	E46687-001		Terminal Strip for Wrapping Wiring

9-(5) TPS-80B,C AC Socket P.C. Board Ass'y

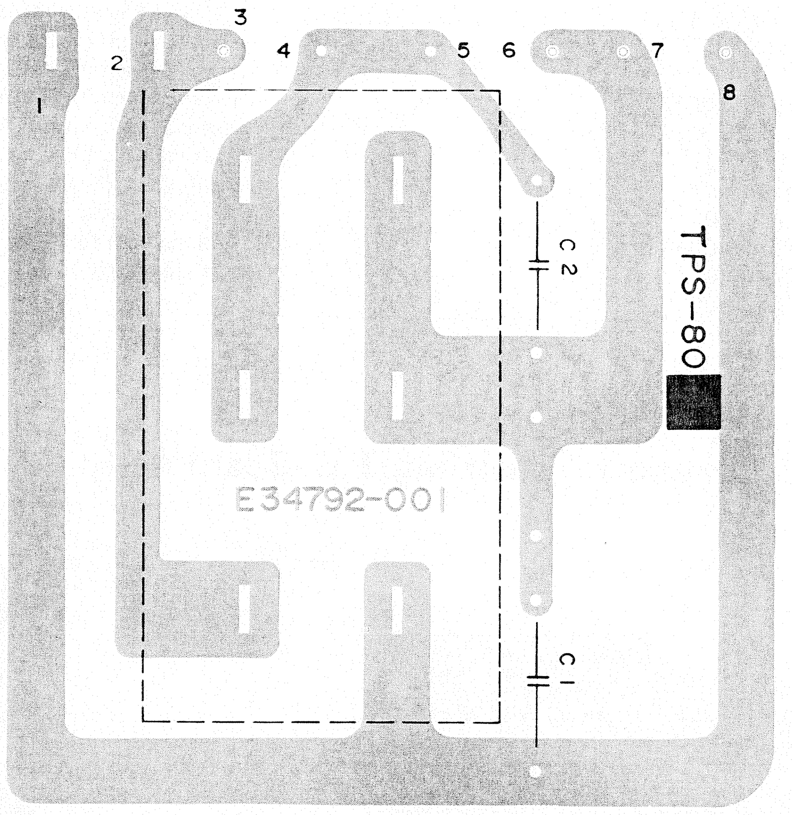


Fig. 31

Capacitors

Item No.	Part Number	Rating	Description
C1	QFH53AM-103	0.01 μF	Metalized Mylar, Switch By-pass
C2	QFH72BM-103	"	Metalized Mylar, Across the Line (TPS-80B)
	QFH53AM-103	"	Metalized Mylar, Across the Line (TPS-80C)

Others

Item No.	Part Number	Rating	Description
	E34792-001		Circuit Board
	QMC0637-001		AC Outlet
	E43727-001		Terminal Strip for Wrapping Wiring
	E40130		Terminal Strip for Power Cord

9-(6) TAP-266A,B S.E.A. Amp. & Power Supply P.C. Board Ass'y

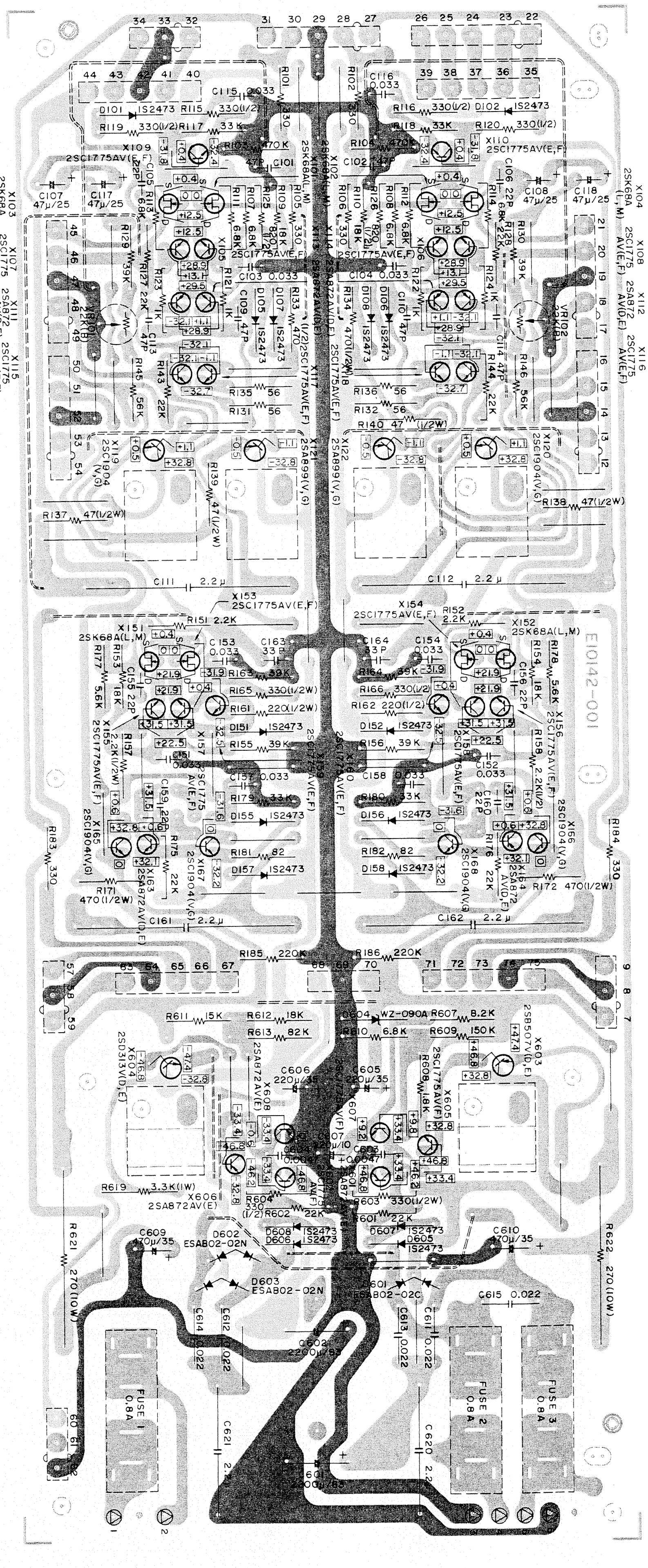

34 33 32
31 30 29 28 27
26 25 24 23 22
44 43 42 41 40
39 38 37 36 35
D101 1S2473 R115 330(1/2)
R119 330(1/2) R117 33K
C115 0.033
C116 0.033
R116 330(1/2) D102 1S2473
R118 33K R120 330(1/2)
R101 330
R102 330
X109 2SC1775AV(E,F)
X110 2SC1775AV(E,F)
C101
C102
R103 470K
R104 470K
C107 47μ/25
C117 47μ/25
C108 47μ/25
C118 47μ/25
X103 2SK68A (L,M)
X104 2SK68A (L,M)
X101 2SK68A(L,M)
X102 2SK68A(L,M)
X105 2SC1775AV(E,F)
X106 2SC1775AV(E,F)
C103 0.033
C104 0.033
X107 2SC1775 AV(E,F)
X108 2SC1775 AV(E,F)
X111 2SA872 AV(D,E)
X112 2SA872 AV(D,E)
X113 2SA872AV(D,E)
X114 2SA872AV(D,E)
X115 2SC1775 AV(E,F)
X116 2SC1775 AV(E,F)
X117 (1/2)2SC1775AV(E,F)
X118 2SC1775AV(E,F)
VR101 2K(B)
VR102 2K(B)
D105 1S2473
D107 1S2473
D106 1S2473
D108 1S2473
C109 47P
C110 47P
C113 47P
C114 47P
R135 56
R136 56
R131 56
R132 56
R140 47(1/2W)
R143 22K
R144 22K
R145 56K
R146 56K
X119 2SC1904 (V,G)
X120 2SC1904(V,G)
X121 2SA899(V,G)
X122 2SA899(V,G)
R137 47(1/2W)
R138 47(1/2W)
R139 47(1/2W)
C111 2.2μ
C112 2.2μ
45 46 47 48 49 50 51 52 53 54
21 20 19 18 17 16 15 14 13 12
X153 2SC1775AV(E,F)
X154 2SC1775AV(E,F)
X151 2SK68A(L,M)
X152 2SK68A(L,M)
R151 2.2K
R152 2.2K
C153 0.033
C154 0.033
C163 33P
C164 33P
R163 39K
R164 39K
R165 330(1/2W)
R166 330(1/2)
R161 220(1/2W)
R162 220(1/2)
D151 1S2473
D152 1S2473
R155 39K
R156 39K
C157 0.033
C158 0.033
R179 33K
R180 33K
D155 1S2473
D156 1S2473
R181 82
R182 82
D157 1S2473
D158 1S2473
X155 2SC1775AV(E,F)
X156 2SC1775AV(E,F)
X157 2SC1775 AV(E,F)
X158 2SC1775AV(E,F)
X165 2SC1904(V,G)
X166 2SC1904(V,G)
X163 2SA872AV(D,E)
X164 2SA872 AV(D,E)
X167 2SC1904(V,G)
X168 2SC1904(V,G)
R171 470(1/2W)
R172 470(1/2W)
R183 330
R184 330
C161 2.2μ
C162 2.2μ
R185 220K
R186 220K
EI0142-001
63 64 65 66 67 68 69 70 71 72 73 74 75
57 58 59
9 8 7
R611 15K R612 18K
R613 82K
D604 WZ-090A R607 8.2K
R610 6.8K R609 150K
X604 2SD313(D,E)
X603 2SB507(D,E)
X608 2SA872AV(E)
X605 2SC1775AV(F)
C606 220μ/35
C605 220μ/35
R608 1.8K
R619 3.3K(1W)
X606 2SA872AV(E)
R604 330 (1/2)
R602 22K
R603 330(1/2W)
R601 22K
D608 1S2473
D606 1S2473
D607 1S2473
D605 1S2473
C609 470μ/35
C610 470μ/35
D602 ESAB02-02N
D603 ESAB02-02N
D601 ESAB02-02C
R621 270(10W)
R622 270(10W)
C615 0.022
C614 0.022
C612 0.022
C613 0.022
C611 0.022
C602 2200μ/63
C601 2200μ/63
C621 2.2
C620 2.2
FUSE 1 0.8A
FUSE 2 0.8A
FUSE 3 0.8A
60 61 62
1 2

Fig. 32

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X101	2SK68A (L, M)			FET	NEC
X102	2SK68A (L, M)			″	″
X103	2SK68A (L, M)			″	″
X104	2SK68A (L, M)			″	″
X105	2SC1775AV (E, F)	300 mW	200 MHz	Silicon	Hitachi
X106	2SC1775AV (E, F)	″	″	″	″
X107	2SC1775AV (E, F)	″	″	″	″
X108	2SC1775AV (E, F)	″	″	″	″
X109	2SC1775AV (E, F)	″	″	″	″
X110	2SC1775AV (E, F)	″	″	″	″
X111	2SA872AV (D, E)	″	″	″	″
X112	2SA872AV (D, E)	″	″	″	″
X113	2SA872AV (D, E)	″	″	″	″
X114	2SA872AV (D, E)	″	″	″	″
X115	2SC1775AV (E, F)	″	″	″	″
X116	2SC1775AV (E, F)	″	″	″	″
X117	2SC1775AV (E, F)	″	″	″	″
X118	2SC1775AV (E, F)	″	″	″	″
X119	2SC1904 (V, G)	1 W	130 MHz	″	Fujitsu
X120	2SC1904 (V, G)	″	″	″	″
X121	2SA899 (V, G)	″	100 MHz	″	″
X122	2SA899 (V, G)	″	″	″	″
X151	2SK68A (L, M)			FET	NEC
X152	2SK68A (L, M)			″	″
X153	2SK68A (L, M)			″	″
X154	2SK68A (L, M)			″	″
X155	2SC1775AV (E, F)	300 mW	200 MHz	Silicon	Hitachi
X156	2SC1775AV (E, F)	″	″	″	″
X157	2SC1775AV (E, F)	″	″	″	″
X158	2SC1775AV (E, F)	″	″	″	″
X159	2SC1775AV (E, F)	″	″	″	″
X160	2SC1775AV (E, F)	″	″	″	″
X163	2SA872AV (D, E)	″	″	″	″
X164	2SA872AV (D, E)	″	″	″	″
X165	2SC1904 (V, G)	1 W	130 MHz	″	Fujitsu
X166	2SC1904 (V, G)	″	″	″	″
X167	2SC1904 (V, G)	″	″	″	″
X168	2SC1904 (V, G)	″	″	″	″
X601	2SA872AV (E)	300 mW	200 MHz	″	Hitachi
X602	2SC1775AV (F)	″	″	″	″
X603	2SB507V (D, E)	30 W	8 MHz	″	Sanyo
X604	2SD313V (D, E)	″	″	″	″
X605	2SC1775AV (F)	300 mW	200 MHz	″	Hitachi
X606	2SA872AV (E)	″	″	″	″
X607	2SC1775AV (F)	″	″	″	″
X608	2SA872AV (E)	″	″	″	″

Diodes

Item No.	Part Number	Rating	Description	Maker
D101	1S2473		Silicon	Toyo Dengu
D102	1S2473		″	″
D105	1S2473		″	″
D106	1S2473		″	″
D107	1S2473		″	″
D108	1S2473		″	″
D151	1S2473		″	″
D152	1S2473		″	″
D155	1S2473		″	″
D156	1S2473		″	″

Diodes

Item No.	Part Number	Rating		Description	Maker
D157	1S2473			Silicon	Toyo Dengu
D158	1S2473			"	"
D601	ESAB02-02C			"	Fuji Denki
D602	ESAB02-02N			"	"
D603	ESAB02-02N			"	"
D604	WZ-090A	9 V		Zener	
D605	1S2473			Silicon	Toyo Dengu
D606	1S2473			"	"
D607	1S2473			"	"
D608	1S2473			"	"

Capacitors

Item No.	Part Number	Rating		Description
C103	QFM31HJ-333N	0.033 µF	50 V	Mylar
C104	QFM31HJ-333N	"	"	"
C105	QCS11HJ-220	22 pF	"	Ceramic
C106	QCS11HJ-220	"	"	"
C107	QEW41EA-476	47 µF	25 V	Electrolytic
C108	QEW41EA-476	"	"	"
C109	QCS11HJ-470	47 pF	50 V	Ceramic
C110	QCS11HJ-470	"	"	"
C111	QFZ0073-225	2.2 µF	250 V	Metalized Film
C112	QFZ0073-225	"	"	"
C113	QCS11HJ-470	47 pF	50 V	Ceramic
C114	QCS11HJ-470	"	"	"
C115	QFM31HJ-333N	0.033 µF	"	Mylar
C116	QFM31HJ-333N	"	"	"
C117	QEW41EA-476	47 µF	25 V	Electrolytic
C118	QEW41EA-476	"	"	"
C151	QFM31HJ-333N	0.033 µF	50 V	Mylar
C152	QFM31HJ-333N	"	"	"
C153	QFM31HJ-333N	"	"	"
C154	QFM31HJ-333N	"	"	"
C155	QCS11HJ-220	22 pF	"	Ceramic
C156	QCS11HJ-220	"	"	"
C157	QFM31HJ-333N	0.033 µF	"	Mylar
C158	QFM31HJ-333N	"	"	"
C159	QCS11HJ-330	33 pF	"	Ceramic
C160	QCS11HJ-330	"	"	"
C161	QFZ0073-225	2.2 µF	250 V	Metalized Mylar
C162	QFZ0073-225	"	"	"
C163	QCS11HJ-330	33 pF	50 V	Ceramic
C164	QCS11HJ-330	"	"	"
C601	QEW81JA-228	2200 µF	63 V	Electrolytic
C602	QEW81JA-228	"	"	"
C603	QCF11HP-472	0.0047 µF	50 V	Ceramic
C604	QCF11HP-472	"	"	"
C605	QEW41VA-227	220 µF	35 V	Electrolytic
C606	QEW41VA-227	"	"	"
C607	QEW41AA-227	"	10 V	"
C609	QEW41VA-477	470 µF	35 V	"
C610	QEW41VA-477	"	"	"
C611	QFZ0072-223	0.022 µF	600 V	Metalized Film
C612	QFZ0072-223	"	"	"
C613	QFZ0072-223	"	"	"
C614	QFZ0072-223	"	"	"
C615	QFZ0072-223	"	"	"
C620	QFZ0074-225	2.2 µF	250 V	"
C621	QFZ0074-225	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-331	330 Ω	1/4 W	Carbon
R102	QRD141J-331	"	"	"
R103	QRD141J-474	470 kΩ	"	"
R104	QRD141J-474	"	"	"
R105	QRD141J-331	330 Ω	"	"
R106	QRD141J-331	"	"	"
R107	QRD141J-273	27 kΩ	"	"
R108	QRD141J-273	"	"	"
R109	QRD141J-183	18 kΩ	"	"
R110	QRD141J-183	"	"	"
R111	QRD141J-682	6.8 kΩ	"	"
R112	QRD141J-682	"	"	"
R113	QRD141J-682	"	"	"
R114	QRD141J-682	"	"	"
R115	QRD126J-331	330 Ω	1/2 W	Uninflammable Carbon
R116	QRD126J-331	"	"	"
R117	QRD141J-333	33 kΩ	"	Carbon
R118	QRD141J-333	"	"	"
R119	QRD126J-331	330 Ω	"	Uninflammable Carbon
R120	QRD126J-331	"	"	"
R121	QRD141J-102	1 kΩ	"	Carbon
R122	QRD141J-102	"	"	"
R123	QRD141J-102	"	"	"
R124	QRD141J-102	"	"	"
R125	QRD126J-821	820 Ω	"	Uninflammable Carbon
R126	QRD126J-821	"	"	"
R127	QRD141J-223	22 kΩ	"	Carbon
R128	QRD141J-223	"	"	"
R129	QRD141J-393	39 kΩ	"	"
R130	QRD141J-393	"	"	"
R131	QRD141J-560	56 Ω	"	"
R132	QRD141J-560	"	"	"
R133	QRD126J-471	470 Ω	"	Uninflammable Carbon
R134	QRD126J-471	"	"	"
R135	QRD141J-560	56 Ω	"	Carbon
R136	QRD141J-560	"	"	"
R137	QRD126J-470	47 Ω	"	Uninflammable Carbon
R138	QRD126J-470	"	"	"
R139	QRD126J-470	"	"	"
R140	QRD126J-470	"	"	"
R143	QRD141J-223	22 kΩ	1/4 W	Carbon
R144	QRD141J-223	"	"	"
R145	QRD141J-563	56 kΩ	"	"
R146	QRD141J-563	"	"	"
R151	QRD141J-222	2.2 kΩ	"	"
R152	QRD141J-222	"	"	"
R153	QRD141J-183	18 kΩ	"	"
R154	QRD141J-183	"	"	"
R155	QRD141J-393	39 kΩ	"	"
R156	QRD141J-393	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R157	QRD126J-222	2.2 kΩ	1/2 W	Uninflammable Carbon
R158	QRD126J-222	"	"	"
R161	QRD126J-221	220 Ω	"	"
R162	QRD126J-221	"	"	"
R163	QRD141J-393	39 kΩ	1/4 W	Carbon
R164	QRD141J-393	"	"	"
R165	QRD126J-331	330 Ω	1/2 W	Uninflammable Carbon
R166	QRD126J-331	"	"	"
R171	QRD126J-471	470 Ω	"	"
R172	QRD126J-471	"	"	"
R175	QRD141J-223	22 kΩ	1/4 W	Carbon
R176	QRD141J-223	"	"	"
R177	QRD141J-562	5.6 kΩ	"	"
R178	QRD141J-562	"	"	"
R179	QRD141J-333	33 kΩ	"	"
R180	QRD141J-333	"	"	"
R181	QRD141J-820	82 Ω	"	"
R182	QRD141J-820	"	"	"
R183	QRD141J-331	330 Ω	"	"
R184	QRD141J-331	"	"	"
R185	QRD141J-224	220 kΩ	"	"
R186	QRD141J-224	"	"	"
R601	QRD141J-223	22 kΩ	"	"
R602	QRD141J-223	"	"	"
R603	QRD126J-331	330 Ω	1/2 W	Uninflammable Carbon
R604	QRD126J-331	"	"	"
R607	QRD141J-822	8.2 kΩ	1/4 W	Carbon
R608	QRD141J-183	18 kΩ	"	"
R609	QRD141J-154	150 kΩ	"	"
R610	QRD141J-682	6.8 kΩ	"	"
R611	QRD141J-153	15 kΩ	"	"
R612	QRD141J-183	18 kΩ	"	"
R613	QRD141J-823	82 kΩ	"	"
R619	QRG017J-332S	3.3 kΩ	1 W	O.M.F.
R621	QRF106K-271	270 Ω	10 W	Uninflammable O.M.F.
R622	QRG106K-271	"	"	"

Others

Item No.	Part Number	Rating	Description
	E10142-001		Circuit Board
	E03628-5		5-pin Plug
	E03628-3		3-pin Plug
	E61537-001		Heat Sink for X119 – X122
	E61537-002		Heat Sink for X603, X604
	E43727-002		Terminal Strip for Wrapping Wiring
	QRD141J-0R0		0 Ω Jump Wire
	E45524-001		Contact Clip for Fuse (TAP-266A)
	E48965-002		Contact Clip for Fuse (TAP-266B)

9-(7) TAC-430A,B S.E.A. Control P.C. Board Ass'y

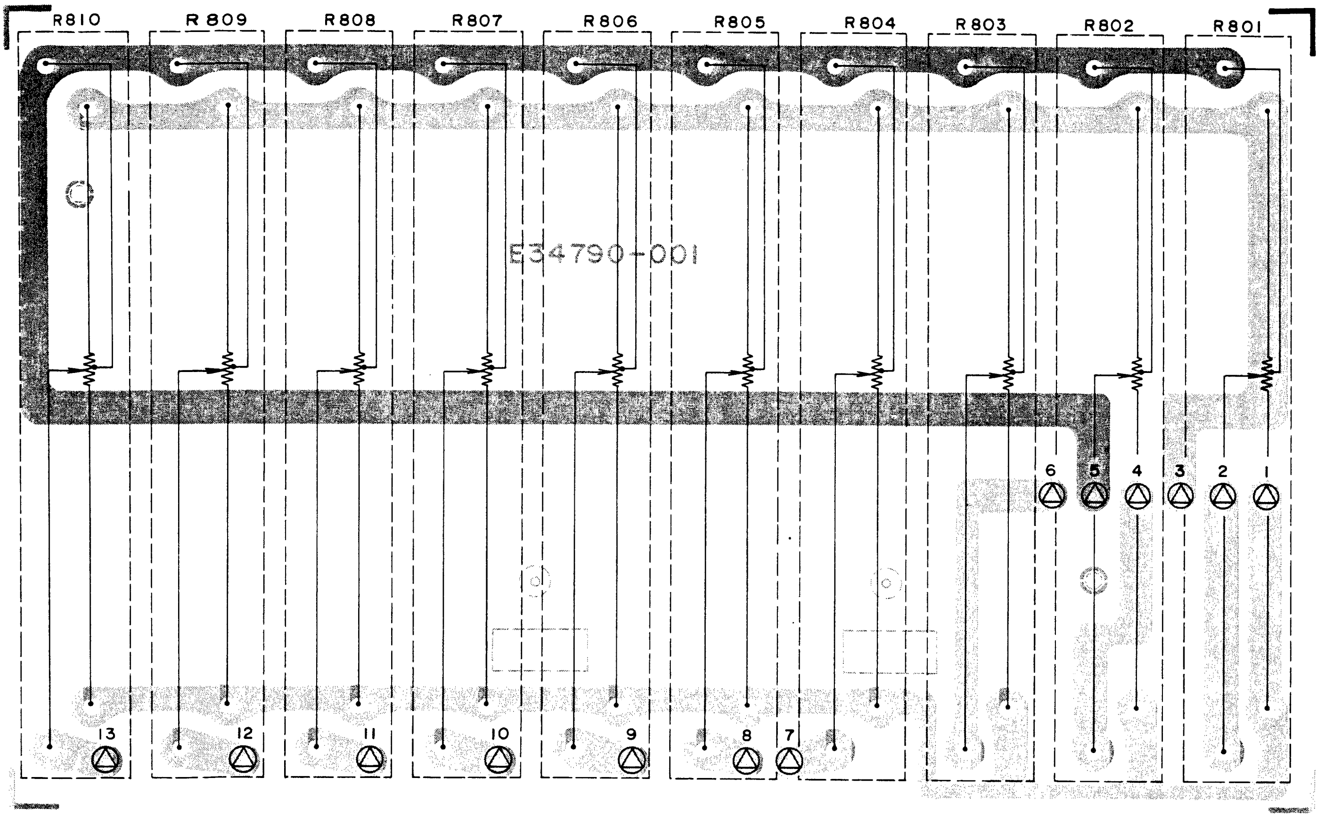

R810
R809
R808
R807
R806
R805
R804
R803
R802
R801
E34790-001
1
2
3
4
5
6
7
8
9
10
11
12
13

Fig. 33

Resistors

Item No.	Part Number	Rating	Description
R801	QVT6C2W-8F5	250 kΩ (W)	Slide Variable Resistor for S.E.A. Control
R802	QVT6C2W-8F5	"	"
R803	QVT6C2W-8F5	"	"
R804	QVT6C2W-8F5	"	"
R805	QVT6C2W-8F5	"	"
R806	QVT6C2W-8F5	"	"
R807	QVT6C2W-8F5	"	"
R808	QVT6C2W-8F5	"	"
R809	QVT6C2W-8F5	"	"
R810	QVT6C2W-8F5	"	"

Others

Item No.	Part Number	Rating	Description
	E34790-001		Circuit Board
	E46687-001		Terminal Strip for Wrapping Wiring
	E61596-001		Z-shaped Bracket (TAC-430A only)
	E61431-001		L-shaped Bracket
	E34784-001		U-shaped Bracket

9-(8) TAC-431 Additional Control Semiconductor "L" P.C. Board Ass'y

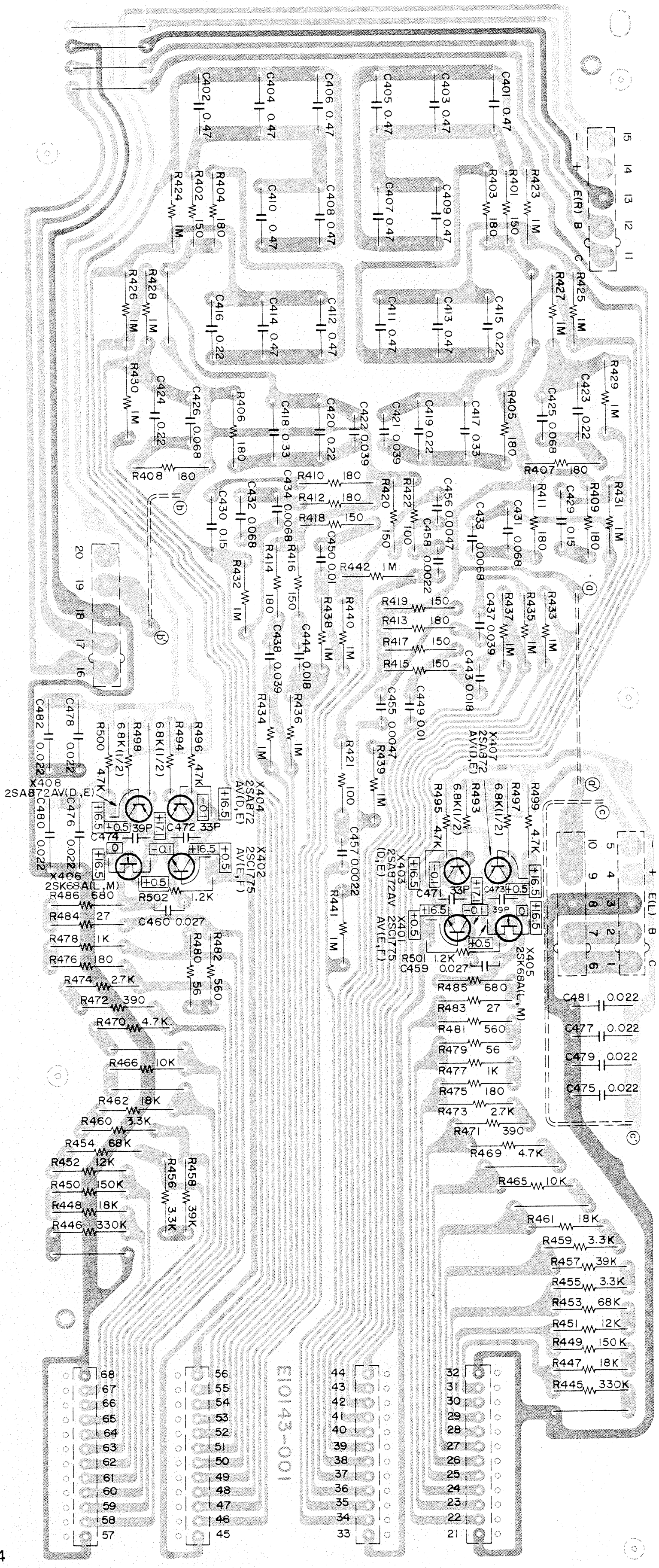

C401 0.47
C402 0.47
C403 0.47
C404 0.47
C405 0.47
C406 0.47
C407 0.47
C408 0.47
C409 0.47
C410 0.47
C411 0.47
C412 0.47
C413 0.47
C414 0.47
C415 0.22
C416 0.22
C417 0.33
C418 0.33
C419 0.22
C420 0.22
C421 0.039
C422 0.039
C423 0.22
C424 0.22
C425 0.068
C426 0.068
R401 150
R402 150
R403 180
R404 180
R405 180
R406 180
R407 180
R408 180
R423 1M
R424 1M
R425 1M
R426 1M
R427 1M
R428 1M
R429 1M
R430 1M
R410 180
R412 180
R418 150
R420 150
R422 100
R411 180
R409 180
R431 1M
C429 0.15
C430 0.15
C431 0.068
C432 0.068
C433 0.0068
C434 0.0068
C456 0.0047
C458 0.0022
C450 0.01
R442 1M
R414 180
R416 150
R432 1M
R419 150
R413 180
R417 150
R415 150
R433 1M
R435 1M
R437 1M
C437 0.039
C438 0.039
C443 0.018
C444 0.018
R438 1M
R440 1M
C449 0.01
C455 0.0047
R434 1M
R436 1M
R421 100
R439 1M
C457 0.0022
R441 1M
C478 0.022
C482 0.022
R500 4.7K
R498 6.8K(1/2)
R494 6.8K(1/2)
R496 4.7K
X404 2SA872 AV(D,E)
X408 2SA872AV(D,E)
C476 0.022
C480 0.022
C474 39P
C472 33P
X402 2SC1775 AV(E,F)
X406 2SK68A(L,M)
R502 1.2K
C460 0.027
X407 2SA872 AV(D,E)
R499 4.7K
R497 6.8K(1/2)
R493 6.8K(1/2)
R495 4.7K
X403 2SA872AV (D,E)
X401 2SC1775 AV(E,F)
C471 33P
C473 39P
R501 1.2K
C459 0.027
X405 2SK68A(L,M)
+16.5
+0.5
-0.1
+17
R486 680
R484 27
R478 1K
R476 180
R474 2.7K
R472 390
R470 4.7K
R480 56
R482 560
R466 10K
R462 18K
R460 3.3K
R454 68K
R452 12K
R450 150K
R448 18K
R446 330K
R456 3.3K
R458 39K
R485 680
R483 27
R481 560
R479 56
R477 1K
R475 180
R473 2.7K
R471 390
R469 4.7K
R465 10K
R461 18K
R459 3.3K
R457 39K
R455 3.3K
R453 68K
R451 12K
R449 150K
R447 18K
R445 330K
C481 0.022
C477 0.022
C479 0.022
C475 0.022
E(R) B C
E(L) B C
+ -
15 14 13 12 11
10 9 8 7 6
5 4 3 2 1
20 19 18 17 16
(a)
(b)
(c)
E10143-001
68 67 66 65 64 63 62 61 60 59 58 57
56 55 54 53 52 51 50 49 48 47 46 45
44 43 42 41 40 39 38 37 36 35 34 33
32 31 30 29 28 27 26 25 24 23 22 21

Fig. 34

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X401	2SC1775AV (E, F)	300 mW	200 MHz	Silicon	Hitachi
X402	2SC1775AV (E, F)	″	″	″	″
X403	2SA872AV (D, E)	″	″	″	″
X404	2SA872AV (D, E)	″	″	″	″
X405	2SK68A (L, M)			FET	NEC
X406	2SK68A (L, M)			″	″
X407	2SA872AV (D, E)	300 mW	200 MHz	Silicon	Hitachi
X408	2SA872AV (D, E)	″	″	″	″

Capacitors

Item No.	Part Number	Rating		Description
C401	QFM31HJ-474N	0.47 µF	50 V	Mylar
C402	QFM31HJ-474N	″	″	″
C403	QFM31HJ-474N	″	″	″
C404	QFM31HJ-474N	″	″	″
C405	QFM31HJ-474N	″	″	″
C406	QFM31HJ-474N	″	″	″
C407	QFM31HJ-474N	″	″	″
C408	QFM31HJ-474N	″	″	″
C409	QFM31HJ-474N	″	″	″
C410	QFM31HJ-474N	″	″	″
C411	QFM31HJ-474N	″	″	″
C412	QFM31HJ-474N	″	″	″
C413	QFM31HJ-474N	″	″	″
C414	QFM31HJ-474N	″	″	″
C415	QFM31HJ-224N	0.22 µF	″	″
C416	QFM31HJ-224N	″	″	″
C417	QFM31HJ-334N	0.33 µF	″	″
C418	QFM31HJ-334N	″	″	″
C419	QFM31HJ-224N	0.22 µF	″	″
C420	QFM31HJ-224N	″	″	″
C421	QFM31HJ-393N	0.039 µF	″	″
C422	QFM31HJ-393N	″	″	″
C423	QFM31HJ-224N	0.22 µF	″	″
C424	QFM31HJ-224N	″	″	″
C425	QFM31HJ-683N	0.068 µF	″	″
C426	QFM31HJ-683N	″	″	″
C429	QFM31HJ-154N	0.15 µF	″	″
C430	QFM31HJ-154N	″	″	″
C431	QFM31HJ-683N	0.068 µF	″	″
C432	QFM31HJ-683N	″	″	″
C433	QFM31HJ-683N	″	″	″
C434	QFM31HJ-683N	″	″	″
C437	QFM31HJ-393N	0.039 µF	″	″
C438	QFM31HJ-393N	″	″	″
C443	QFM31HJ-183N	0.018 µF	″	″
C444	QFM31HJ-183N	″	″	″
C449	QFM31HJ-103N	0.01 µF	″	″
C450	QFM31HJ-103N	″	″	″
C455	QFM31HJ-472N	0.0047 µF	″	″
C456	QFM31HJ-472N	″	″	″
C457	QFM31HJ-222N	0.0022 µF	″	″
C458	QFM31HJ-222N	″	″	″
C459	QFM31HJ-273N	0.027 µF	″	″
C460	QFM31HJ-273N	″	″	″

Capacitors

Item No.	Part Number	Rating		Description
C471	QCS11HJ-330	33 pF	50 V	Ceramic
C472	QCS11HJ-330	"	"	"
C473	QCS11HJ-390	39 pF	"	"
C474	QCS11HJ-390	"	"	"
C475	QFZ0072-223	0.022 μF	600 V	Metalized Film
C476	QFZ0072-223	"	"	"
C477	QFZ0072-223	"	"	"
C478	QFZ0072-223	"	"	"
C479	QFZ0072-223	"	"	"
C480	QFZ0072-223	"	"	"
C481	QFZ0072-223	"	"	"
C482	QFZ0072-223	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R401	QRD141J-151	150 Ω	1/4 W	Carbon
R402	QRD141J-151	"	"	"
R403	QRD141J-181	180 Ω	"	"
R404	QRD141J-181	"	"	"
R405	QRD141J-181	"	"	"
R406	QRD141J-181	"	"	"
R407	QRD141J-181	"	"	"
R408	QRD141J-181	"	"	"
R409	QRD141J-181	"	"	"
R410	QRD141J-181	"	"	"
R411	QRD141J-181	"	"	"
R412	QRD141J-181	"	"	"
R413	QRD141J-181	"	"	"
R414	QRD141J-181	"	"	"
R415	QRD141J-151	150 Ω	"	"
R416	QRD141J-151	"	"	"
R417	QRD141J-151	"	"	"
R418	QRD141J-151	"	"	"
R419	QRD141J-151	"	"	"
R420	QRD141J-151	"	"	"
R421	QRD141J-101	100 Ω	"	"
R422	QRD141J-101	"	"	"
R423	QRD141J-105	1 MΩ	"	"
R424	QRD141J-105	"	"	"
R425	QRD141J-105	"	"	"
R426	QRD141J-105	"	"	"
R427	QRD141J-105	"	"	"
R428	QRD141J-105	"	"	"
R429	QRD141J-105	"	"	"
R430	QRD141J-105	"	"	"
R431	QRD141J-105	"	"	"
R432	QRD141J-105	"	"	"
R433	QRD141J-105	"	"	"
R434	QRD141J-105	"	"	"
R435	QRD141J-105	"	"	"
R436	QRD141J-105	"	"	"
R437	QRD141J-105	"	"	"
R438	QRD141J-105	"	"	"
R439	QRD141J-105	"	"	"
R440	QRD141J-105	"	"	"
R441	QRD141J-105	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R442	QRD141J-105	1 MΩ	1/4 W	Carbon
R445	QRD141J-334	330 kΩ	″	″
R446	QRD141J-334	″	″	″
R447	QRD141J-183	18 kΩ	″	″
R448	QRD141J-183	″	″	″
R449	QRD141J-154	150 kΩ	″	″
R450	QRD141J-154	″	″	″
R451	QRD141J-123	12 kΩ	″	″
R452	QRD141J-123	″	″	″
R453	QRD141J-683	68 kΩ	″	″
R454	QRD141J-683	″	″	″
R455	QRD141J-332	3.2 kΩ	″	″
R456	QRD141J-332	″	″	″
R457	QRD141J-393	39 kΩ	″	″
R458	QRD141J-393	″	″	″
R459	QRD141J-332	3.3 kΩ	″	″
R460	QRD141J-332	″	″	″
R461	QRD141J-183	18 kΩ	″	″
R462	QRD141J-183	″	″	″
R465	QRD141J-103	10 kΩ	″	″
R466	QRD141J-103	″	″	″
R469	QRD141J-472	4.7 kΩ	″	″
R470	QRD141J-472	″	″	″
R471	QRD141J-391	390 Ω	″	″
R472	QRD141J-391	″	″	″
R473	QRD141J-272	2.7 kΩ	″	″
R474	QRD141J-272	″	″	″
R475	QRD141J-181	180 Ω	″	″
R476	QRD141J-181	″	″	″
R477	QRD141J-102	1 kΩ	″	″
R478	QRD141J-102	″	″	″
R479	QRD141J-560	56 Ω	″	″
R480	QRD141J-560	″	″	″
R481	QRD141J-561	560 Ω	″	″
R482	QRD141J-561	″	″	″
R483	QRD141J-270	27 Ω	″	″
R484	QRD141J-270	″	″	″
R485	QRD141J-681	680 Ω	″	″
R486	QRD141J-681	″	″	″
R493	QRD126J-682	6.8 kΩ	1/2 W	Uninflammable Carbon
R494	QRD126J-682	″	″	″
R495	QRD141J-472	4.7 kΩ	1/4 W	Carbon
R496	QRD141J-472	″	″	″
R497	QRD126J-682	6.8 kΩ	1/2 W	Uninflammable Carbon
R498	QRD126J-682	″	″	″
R499	QRD141J-472	4.7 kΩ	1/4 W	Carbon
R500	QRD141J-472	″	″	″
R501	QRD141J-122	1.2 kΩ	″	″
R502	QRD141J-122	″	″	″

Others

Item No.	Part Number	Rating	Description
	E10143-001		Circuit Board
	E03707-012		12-pin Connector (Female type)
	E03628-5		5-pin Plug
	QRD141J-0R0		0 Ω Jump Wire

9-(9) TAC-460 Buffer Amp. P.C. Board Ass'y

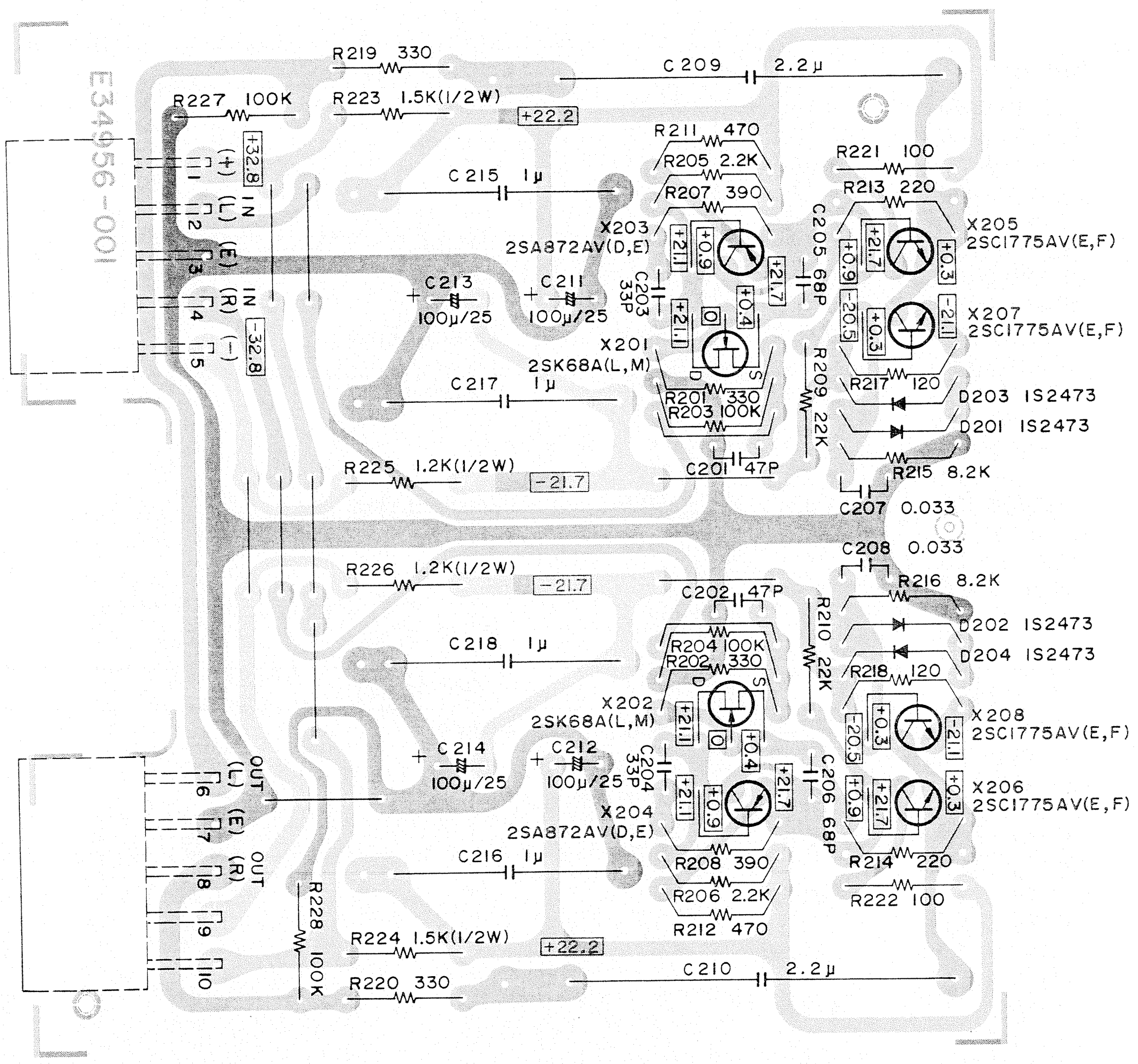

E34956-001
R219 330
C209 2.2μ
R227 100K
R223 1.5K(1/2W)
+22.2
R211 470
R205 2.2K
R207 390
R221 100
R213 220
C215 1μ
+32.8
(+)
IN (L)
(E)
IN (R)
(-)
-32.8
1
2
3
4
5
X203
2SA872AV(D,E)
+21.1
+0.9
+21.7
C205 68P
+21.7
+0.3
+0.9
-20.5
X205
2SC1775AV(E,F)
C213
100μ/25
C211
100μ/25
C203 33P
+21.1
+0.4
0
+0.3
-21.1
X207
2SC1775AV(E,F)
X201
2SK68A(L,M)
D
S
R209 22K
R217 120
C217 1μ
R201 330
R203 100K
D203 1S2473
D201 1S2473
R225 1.2K(1/2W)
-21.7
C201 47P
R215 8.2K
C207 0.033
C208 0.033
R226 1.2K(1/2W)
-21.7
C202 47P
R216 8.2K
R210 22K
D202 1S2473
C218 1μ
R204 100K
R202 330
D204 1S2473
R218 120
X202
2SK68A(L,M)
+21.1
0
+0.4
+0.3
-20.5
-21.1
X208
2SC1775AV(E,F)
OUT (L)
(E)
OUT (R)
6
7
8
9
10
C214
100μ/25
C212
100μ/25
C204 33P
C206 68P
X204
2SA872AV(D,E)
+21.1
+0.9
+21.7
+0.9
+21.7
+0.3
X206
2SC1775AV(E,F)
C216 1μ
R208 390
R206 2.2K
R212 470
R214 220
R222 100
R228 100K
R224 1.5K(1/2W)
+22.2
R220 330
C210 2.2μ

Fig. 35

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X201	2SK68A (L, M)			FET	NEC
X202	2SK68A (L, M)			"	"
X203	2SA872AV (D, E)	300 mW	200 MHz	Silicon	Hitachi
X204	2SA872AV (D, E)	"	"	"	"
X205	2SC1775AV (E, F)	"	"	"	"
X206	2SC1775AV (E, F)	"	"	"	"
X207	2SC1775AV (E, F)	"	"	"	"
X208	2SC1775AV (E, F)	"	"	"	"

Diodes

Item No.	Part Number	Rating	Description	Maker
D201	1S2473		Silicon	Toyo Dengu
D202	1S2473		"	"
D203	1S2473		"	"
D204	1S2473		"	"

Capacitors

Item No.	Part Number	Rating		Description
C201	QCS11HJ-470	47 pF	50 V	Ceramic
C202	QCS11HJ-470	〃	〃	〃
C203	QCS11HJ-330	33 pF	〃	〃
C204	QCS11HJ-330	〃	〃	〃
C205	QCS11HJ-680	68 pF	〃	〃
C206	QCS11HJ-680	〃	〃	〃
C207	QFM31HJ-333N	0.033 μF	〃	Mylar
C208	QFM31HJ-333N	〃	〃	〃
C209	QFZ0073-225	2.2 μF	250 V	Metalized Film
C210	QFZ0073-225	〃	〃	〃
C211	QEW41EA-107	100 μF	25 V	Electrolytic
C212	QEW41EA-107	〃	〃	〃
C213	QEW41EA-107	〃	〃	〃
C214	QEW41EA-107	〃	〃	〃
C215	QFZ0074-105	1 μF	250 V	Metalized Film
C216	QFZ0074-105	〃	〃	〃
C217	QFZ0074-105	〃	〃	〃
C218	QFZ0074-105	〃	〃	〃

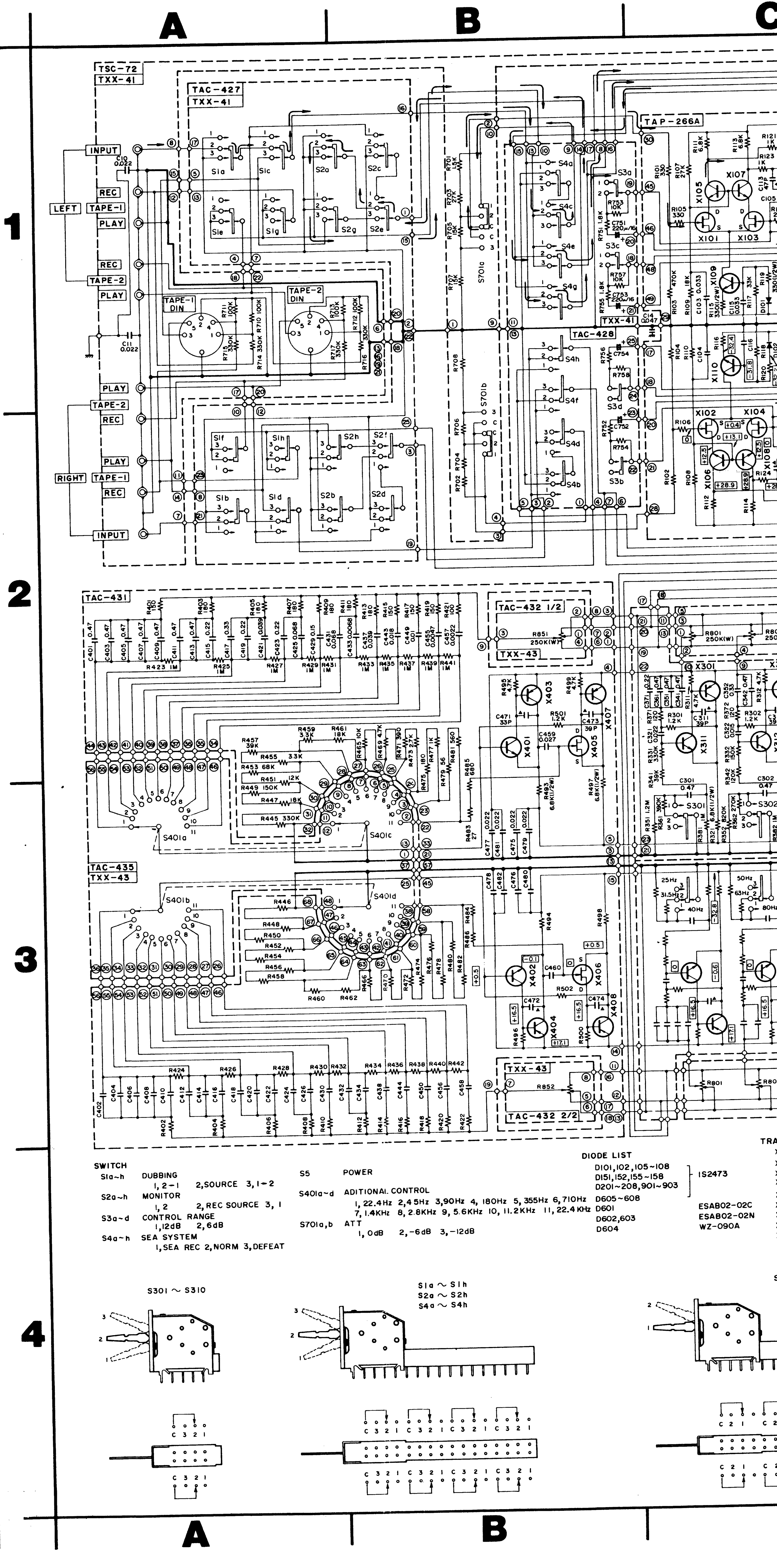
Resistors

Item No.	Part Number	Rating		Description
R201	QRD141J-331	330 Ω	1/4 W	Carbon
R202	QRD141J-331	〃	〃	〃
R203	QRD141J-104	100 kΩ	〃	〃
R204	QRD141J-104	〃	〃	〃
R205	QRD141J-222	2.2 kΩ	〃	〃
R206	QRD141J-222	〃	〃	〃
R207	QRD141J-391	390 Ω	〃	〃
R208	QRD141J-391	〃	〃	〃
R209	QRD141J-223	22 kΩ	〃	〃
R210	QRD141J-223	〃	〃	〃
R211	QRD141J-471	470 Ω	〃	〃
R212	QRD141J-471	〃	〃	〃
R213	QRD141J-221	220 Ω	〃	〃
R214	QRD141J-221	〃	〃	〃
R215	QRD141J-822	8.2 kΩ	〃	〃
R216	QRD141J-822	〃	〃	〃
R217	QRD141J-121	120 Ω	〃	〃
R218	QRD141J-121	〃	〃	〃
R219	QRD141J-331	330 Ω	〃	〃
R220	QRD141J-331	〃	〃	〃
R221	QRD141J-101	100 Ω	〃	〃
R222	QRD141J-101	〃	〃	〃
R223	QRD126J-152	1.5 kΩ	1/2 W	Uninflammable Carbon
R224	QRD126J-152	〃	〃	〃
R225	QRD126J-122	1.2 kΩ	〃	〃
R226	QRD126J-122	〃	〃	〃
R227	QRD141J-104	100 kΩ	1/4 W	Carbon
R228	QRD141J-104	〃	〃	〃

Others

Item No.	Part Number	Rating	Description
	E34956-001		Circuit Board
	E03565-5D		5-pin Socket
	QRD141J-0R0		0 Ω Jump Wire

10. Schematic Diagram


A
B
C
1
2
3
4
TSC-72
TXX-41
TAC-427
TXX-41
INPUT
REC
TAPE-1
PLAY
REC
TAPE-2
PLAY
LEFT
RIGHT
TAPE-1 DIN
TAPE-2 DIN
TAP-266A
TAC-428
S701a
S701b
TAC-431
TAC-432 1/2
TXX-43
TAC-435
TXX-43
S401a
S401b
S401c
S401d
TXX-43
TAC-432 2/2
S301 ~ S310
S1a ~ S1h
S2a ~ S2h
S4a ~ S4h

SWITCH

S1a~h DUBBING
1, 2-1 2, SOURCE 3, 1-2

S2a~h MONITOR
1, 2 2, REC SOURCE 3, 1

S3a~d CONTROL RANGE
1, 12dB 2, 6dB

S4a~h SEA SYSTEM
1, SEA REC 2, NORM 3, DEFEAT

S5 POWER

S401a~d ADITIONAL CONTROL
1, 22.4Hz 2, 45Hz 3, 90Hz 4, 180Hz 5, 355Hz 6, 710Hz
7, 1.4KHz 8, 2.8KHz 9, 5.6KHz 10, 11.2KHz 11, 22.4KHz

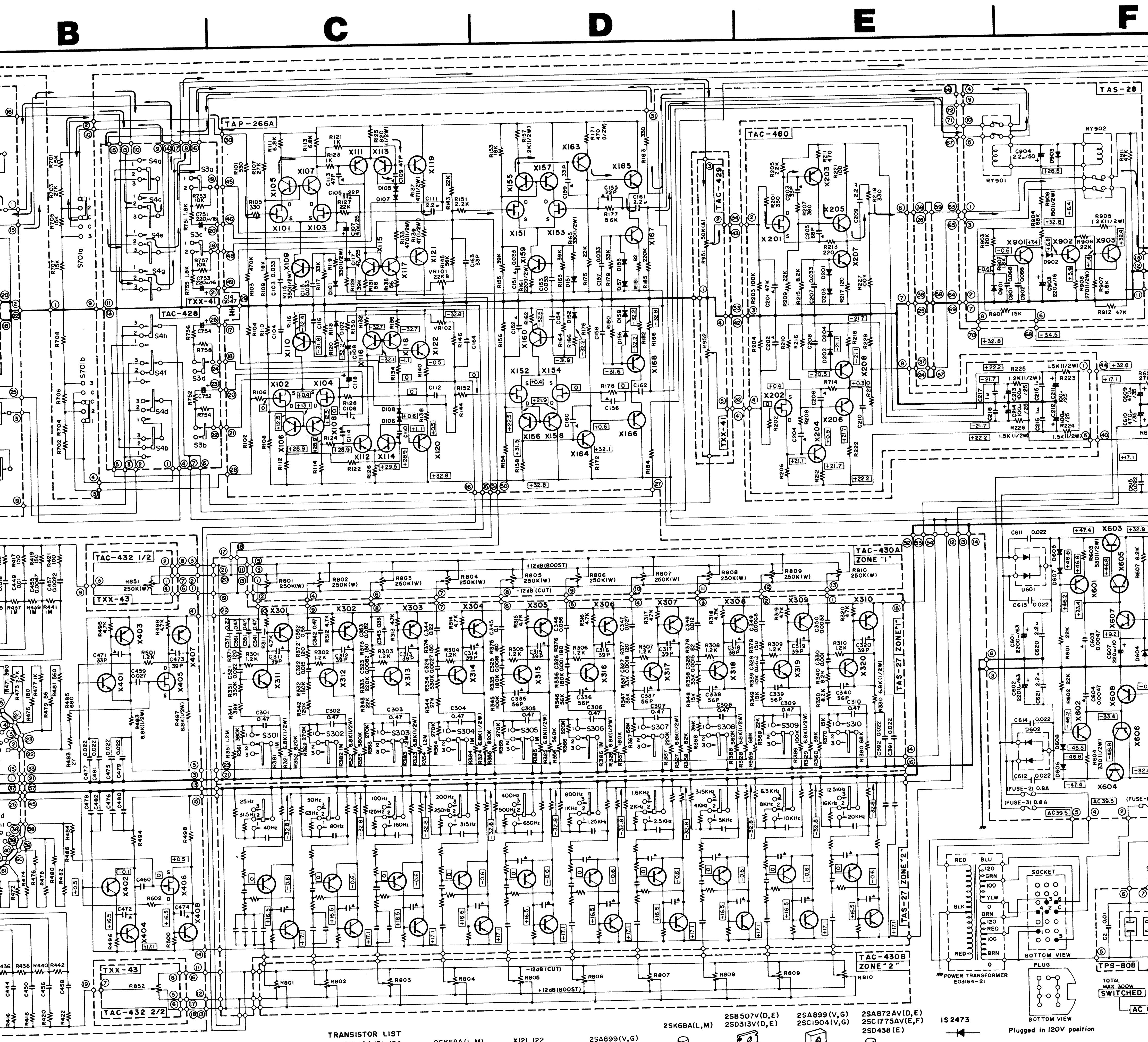
S701a,b ATT
1, 0dB 2, -6dB 3, -12dB

DIODE LIST

D101,102,105~108 D151,152,155~158 D201~208,901~903	1S2473
D605~608	
D601	ESAB02-02C
D602,603	ESAB02-02N
D604	WZ-090A

Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TAS-27	Semiconductor "L" P.C. Board Ass'y	20
TAS-28	Relay Switch P.C. Board Ass'y	24
TXX-41	Terminal Board and Switch P.C. Board Ass'y	25
TXX-43	Frequency Switching P.C. Board Ass'y	26
TPS-80B, C	AC Socket P.C. Board Ass'y	27
TAP-266A, B	S.E.A. Amp. & Power Supply P. C. Board Ass'y	28
TAC-430A, B	S.E.A. Control P.C. Board Ass'y	33
TAC-431	Additional Control Semiconductor "L" P.C. Board Ass'y	34
TAC-460	Buffer Amp. P.C. Board Ass'y	38


B
C
D
E
F
TAP-266A
TAC-460
TAC-429
TAS-28
TAC-428
TXX-41
S701a
S701b
TAC-432 1/2
TXX-43
TAC-430A
ZONE "1"
TAS-27 ZONE "1"
TAS-27 ZONE "2"
TAC-430B
ZONE "2"
TAC-432 2/2
+12dB (BOOST)
-12dB (CUT)
25Hz
50Hz
100Hz
200Hz
400Hz
800Hz
1.6KHz
3.15KHz
6.3KHz
12.5KHz
RY901
RY902
SOCKET
BOTTOM VIEW
PLUG
POWER TRANSFORMER
E03164-21
TPS-80B
TOTAL
MAX 300W
SWITCHED

Plugged in 120V position

▲Ceramic CaPacitor

CONTROL

: 2,45Hz 3,90Hz 4, 180Hz 5, 355Hz 6, 710Hz
8, 2.8KHz 9, 5.6KHz 10, 11.2KHz 11, 22.4KHz

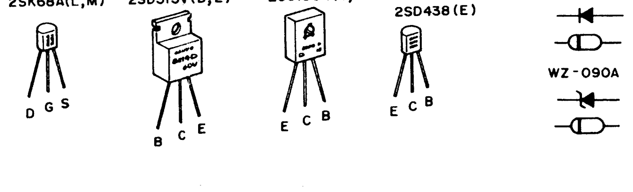
2, -6dB 3, -12dB

DIODE LIST

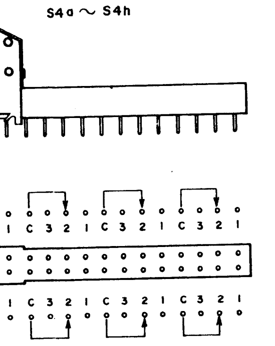
D101,102,105~108 D151,152,155~158 D201~208,901~903 D605~608	1S2473
D601	ESAB02-02C
D602,603	ESAB02-02N
D604	WZ-090A

TRANSISTOR LIST

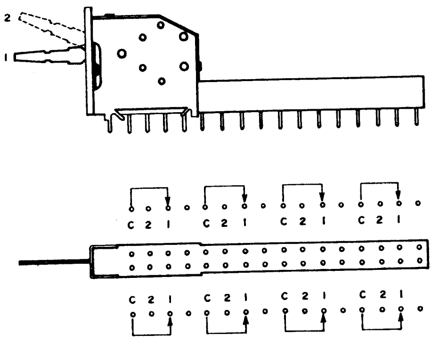
X101~104,151~154 X201,202,405,406	2SK68A(L,M)
X105~110, 115~118 X155~160,205~208 X311~320,401,402	2SC1775AV(E,F)
X111~114,163~164 X203,204,301~310 X403,404,407,408	2SA872AV(D,E)
X119, 120, 165~168	2SC1904(V,G)
X121,122	2SA899(V,G)
X601,606,608	2SA872AV(E)
X602,605,607 X901,903	2SC1775AV(F)
X603	2SB507V(D,E)
X604	2SD313V(D,E)
X902	2SD438(E)


2SK68A(L,M)
D G S
2SB507V(D,E)
2SD313V(D,E)
B C E
2SA899(V,G)
2SC1904(V,G)
E C B
2SA872AV(D,E)
2SC1775AV(E,F)
2SD438(E)
E C B
1S2473
WZ-090A

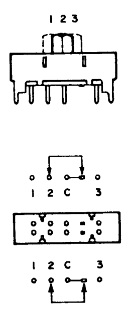
S1a ~ S1h
S2a ~ S2h
S4a ~ S4h


1 C 3 2 1 C 3 2 1 C 3 2 1 C 3 2 1

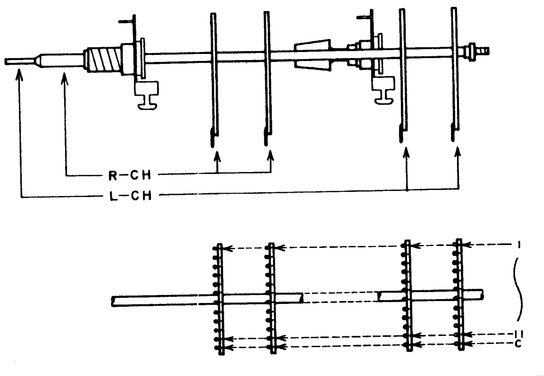
S3a ~ S3d


2
1
C 2 1 C 2 1 C 2 1 C 2 1

S701



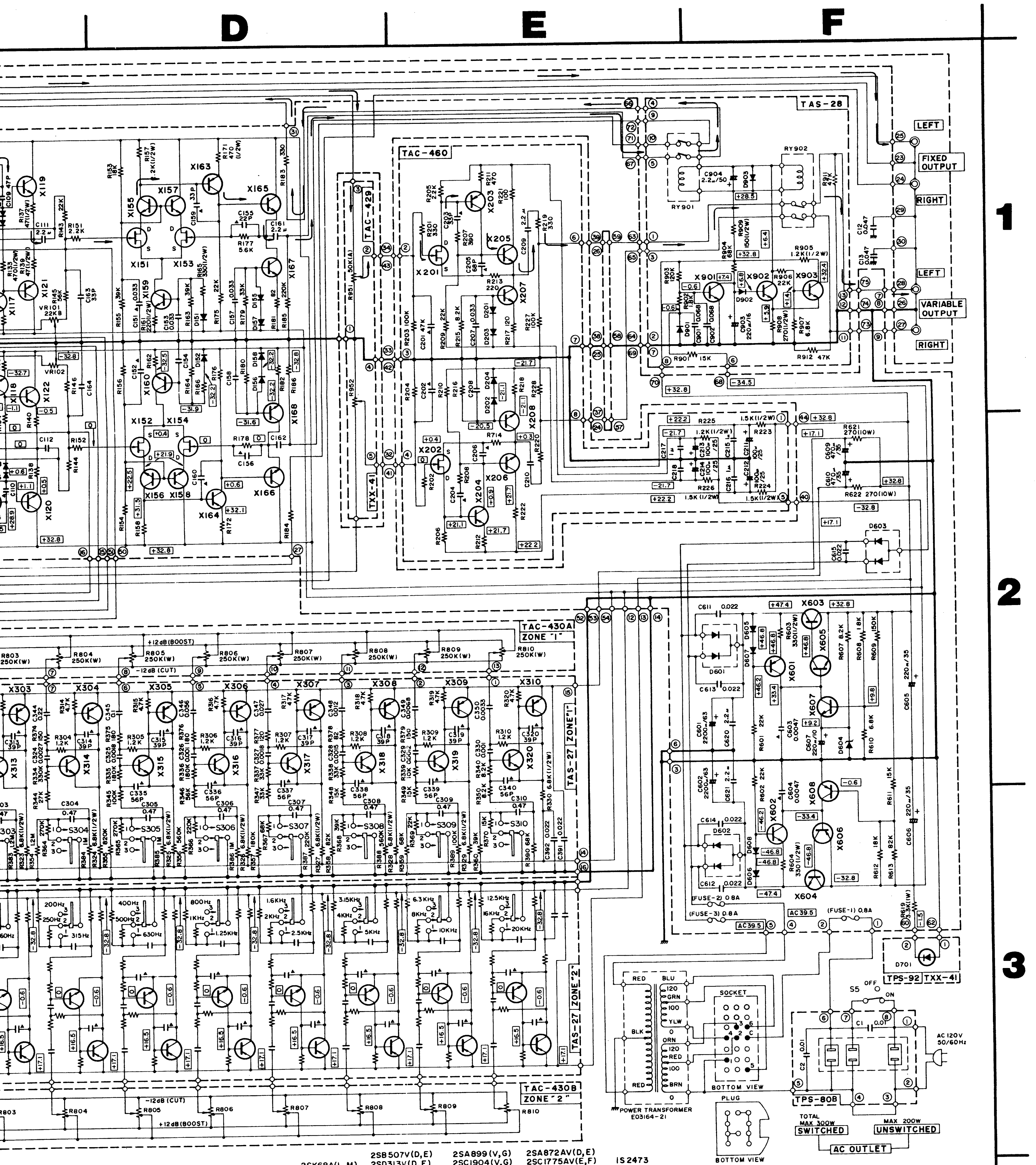
S401



Notes:

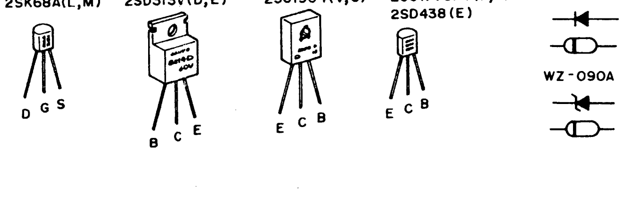
1. Voltage values in ☐ and ☐ are meas
20 kΩ/V) without a signal applied to the
2. Voltage values in ☐ are positive.
— indicates positive B power supply.
3. Voltage values in ☐ are negative.
— indicates negative B power supply.
4. ➔ indicates signal path.
5. Power supply voltage selector plug is set t
6. When replacing the transistors listed bel
the same hFE rating.
X101 and X103, X102 and X104, X10
X111 and X113, X112 and X114, X11
X119 and X120, X121 and X122, X15

This is the standard circuit diagram. The de
change without notice.
This is the standard circuit diagram of the J t
Circuit diagrams of the unit for other areas a


D
E
F
1
2
3
TAS-28
TAC-460
TAC-429
TXX-41
TAC-430A ZONE "1"
TAS-27 ZONE "1"
TAC-430B ZONE "2"
TAS-27 ZONE "2"
TPS-92
TPS-808
LEFT
FIXED OUTPUT
RIGHT
LEFT
VARIABLE OUTPUT
RIGHT
RY901
RY902
+12dB (BOOST)
-12dB (CUT)
POWER TRANSFORMER E03164-21
SOCKET
BOTTOM VIEW
PLUG
(FUSE-1) 0.8A
(FUSE-2) 0.8A
(FUSE-3) 0.8A
S5 OFF ON
AC 120V 50/60Hz
TOTAL MAX 300W SWITCHED
MAX 200W UNSWITCHED
AC OUTLET

T
4] 2SK68A(L,M)
406
118
208] 2SC1775AV(E,F)
402
64
310] 2SA872AV(D,E)
408
168 2SC1904(V,G)

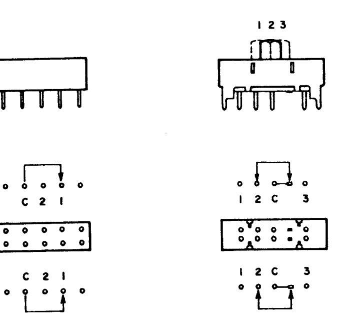
X121,122 2SA899(V,G)
X601,606,608 2SA872AV(E)
X602,605,607] 2SC1775AV(F)
X901,903
X603 2SB507V(D,E)
X604 2SD313V(D,E)
X902 2SD438(E)


2SK68A(L,M)
D G S
2SB507V(D,E)
2SD313V(D,E)
B C E
2SA899(V,G)
2SC1904(V,G)
E C B
2SA872AV(D,E)
2SC1775AV(E,F)
2SD438(E)
E C B
1S2473
WZ-090A

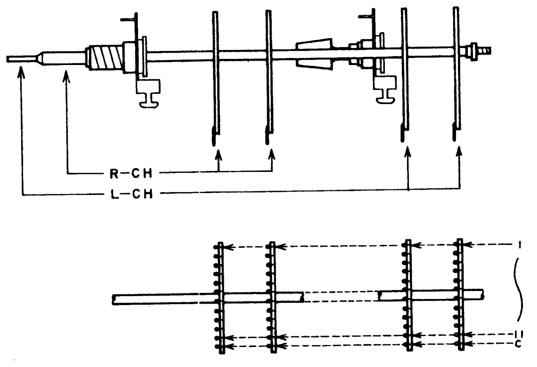
Plugged In 120V position

▲Ceramic CaPacitor

S701


1 2 3
1 2 C
1 2 C 3
C 2 1
C 2 1

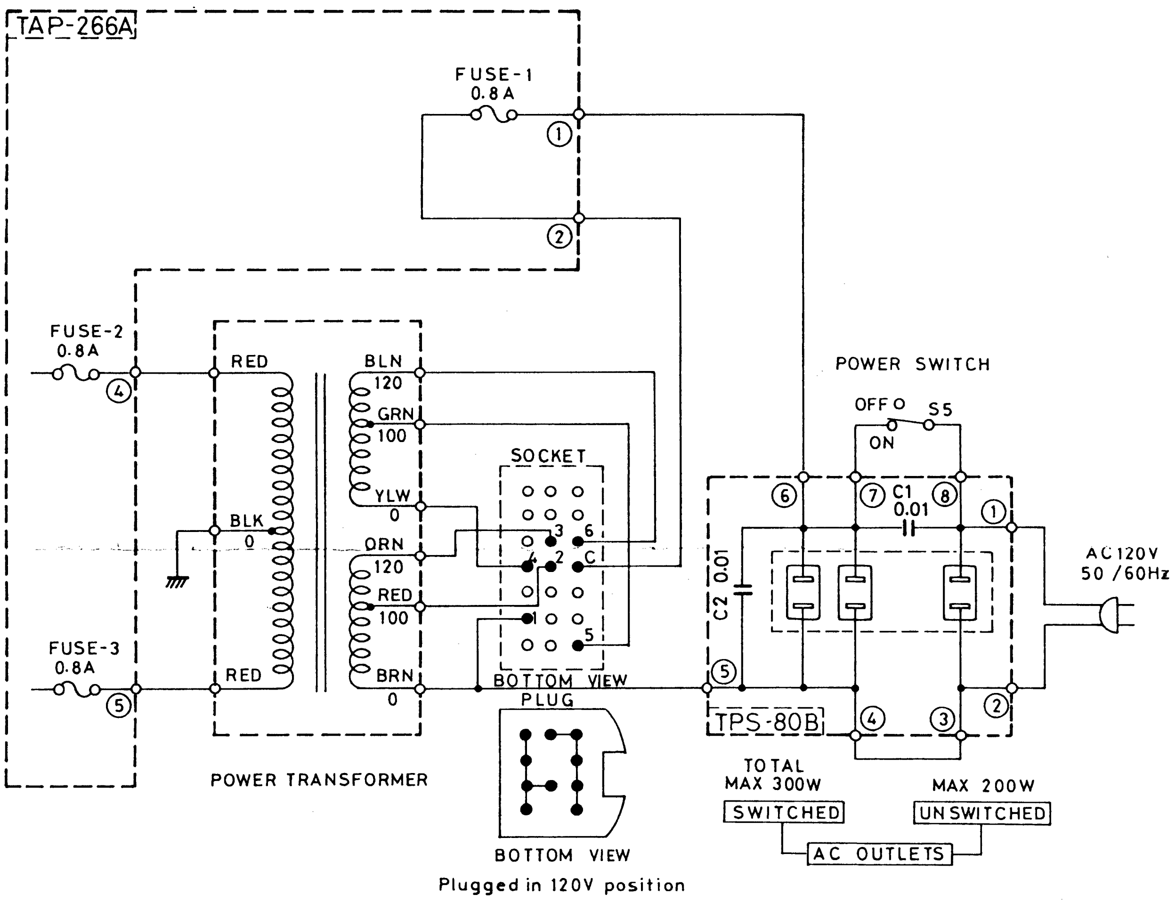
S401



Notes:
1. Voltage values in ☐ and ☐ are measured with a tester (impedance 20 kΩ/V) without a signal applied to the unit.
2. Voltage values in ☐ are positive.
   — indicates positive B power supply.
3. Voltage values in ☐ are negative.
   — indicates negative B power supply.
4. ➔ indicates signal path.
5. Power supply voltage selector plug is set to the 100 V position.
6. When replacing the transistors listed below, be sure to use only ones of the same hFE rating.
   X101 and X103, X102 and X104, X105 and X107, X106 and X108, X111 and X113, X112 and X114, X115 and X117, X116 and X118, X119 and X120, X121 and X122, X151 and X153, X152 and X154

This is the standard circuit diagram. The design and constants are subject to change without notice.
This is the standard circuit diagram of the J type unit for U.S.A. and Canada.
Circuit diagrams of the unit for other areas are provided on the reverse side.

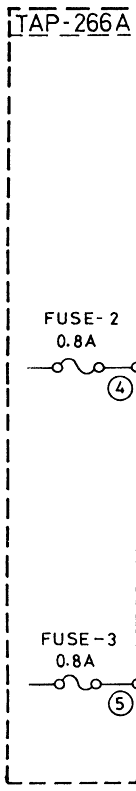
(J) for U.S.A. and CANADA


TAP-266A
FUSE-1
0.8 A
①
②
FUSE-2
0.8A
④
FUSE-3
0.8A
⑤
RED
BLK
0
RED
BLN
120
GRN
100
YLW
0
ORN
120
RED
100
BRN
0
POWER TRANSFORMER
SOCKET
3
6
4
2
C
1
5
BOTTOM VIEW
PLUG
BOTTOM VIEW
Plugged in 120V position
POWER SWITCH
OFF O
ON
S5
⑥
⑦
⑧
C1
0.01
C2 0.01
TPS-80B
③
AC 120V
50 /60Hz
TOTAL
MAX 300W
MAX 200W
SWITCHED
UNSWITCHED
AC OUTLETS

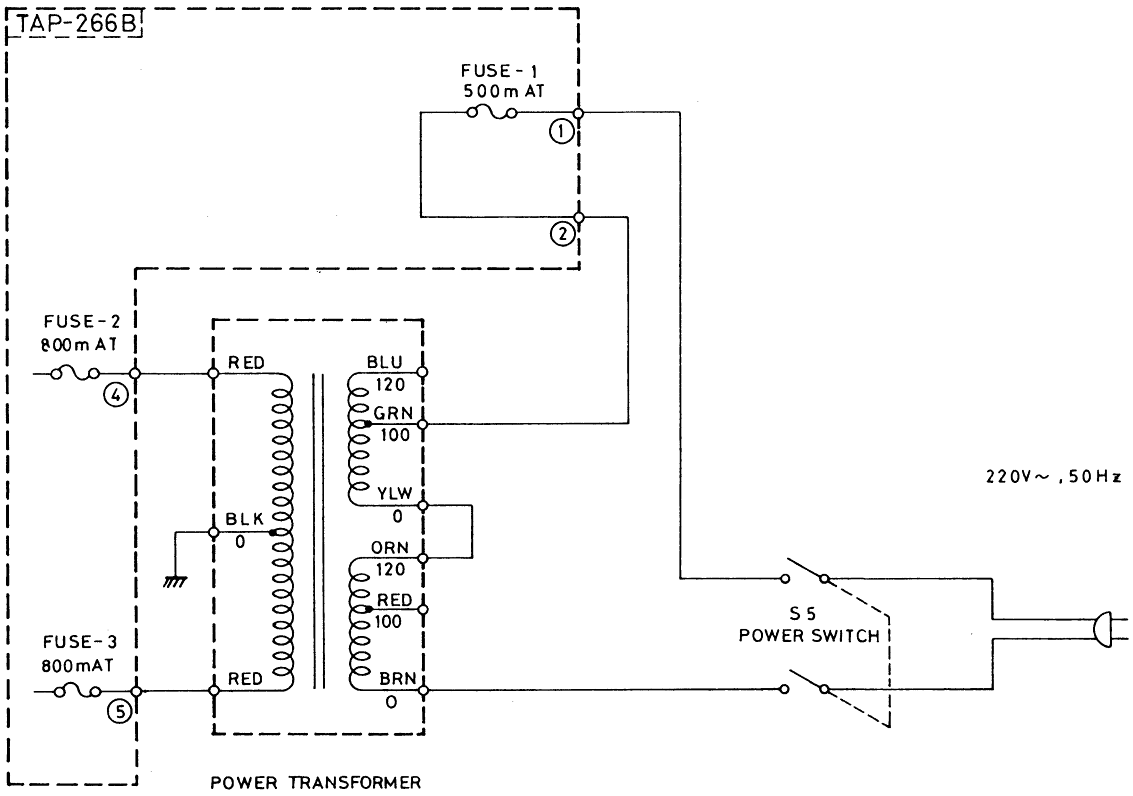
PART NUMBER	DESCRIPTION
QMP1200-244	Power Cord with Plug
QHS3876-162	Cord Stopper
QSL2235-043	Power Switch
QFH53AM-103	Switch By-pass Capacitor : C1
QFH72BM-103	Across the Line Capacitor : C2
QMC0637-001	AC Outlets Ass'y
QMF61U1-R80	Fuse (Primary) 0.8 A
QMF61U1-R80	Fuse (Secondary) 0.8 A
E03676-002	Line Voltage Select Socket
E03676-001	Line Voltage Select Plug
TPS-80B	AC Block P.C. Board Ass'y
TAP-266A	S.E.A. Amp. & Power Supply Block P.C. Board Ass'y

(Note)

(U).(P


TAP-266A
FUSE-2
0.8A
④
FUSE-3
0.8A
⑤

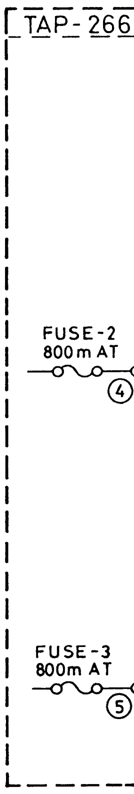
(E) for EUROPE


TAP-266B
FUSE-1
500m AT
①
②
FUSE-2
800m AT
④
FUSE-3
800mAT
⑤
RED
BLK
0
RED
BLU
120
GRN
100
YLW
0
ORN
120
RED
100
BRN
0
POWER TRANSFORMER
220V~ ,50Hz
S5
POWER SWITCH

PART NUMBER	DESCRIPTION
E03544-001	Power Cord with Plug
QHS3876-162	Cord Stopper
QSL2235-044	Power Switch
QMF51A2-R50	Fuse (Primary) : 500 mAT
QMF51A2-R80	Fuse (Secondary) : 800 mAT
TAP-266B	S.E.A. Amp. & Power Supply Block P.C. Board Ass'y

(Note)

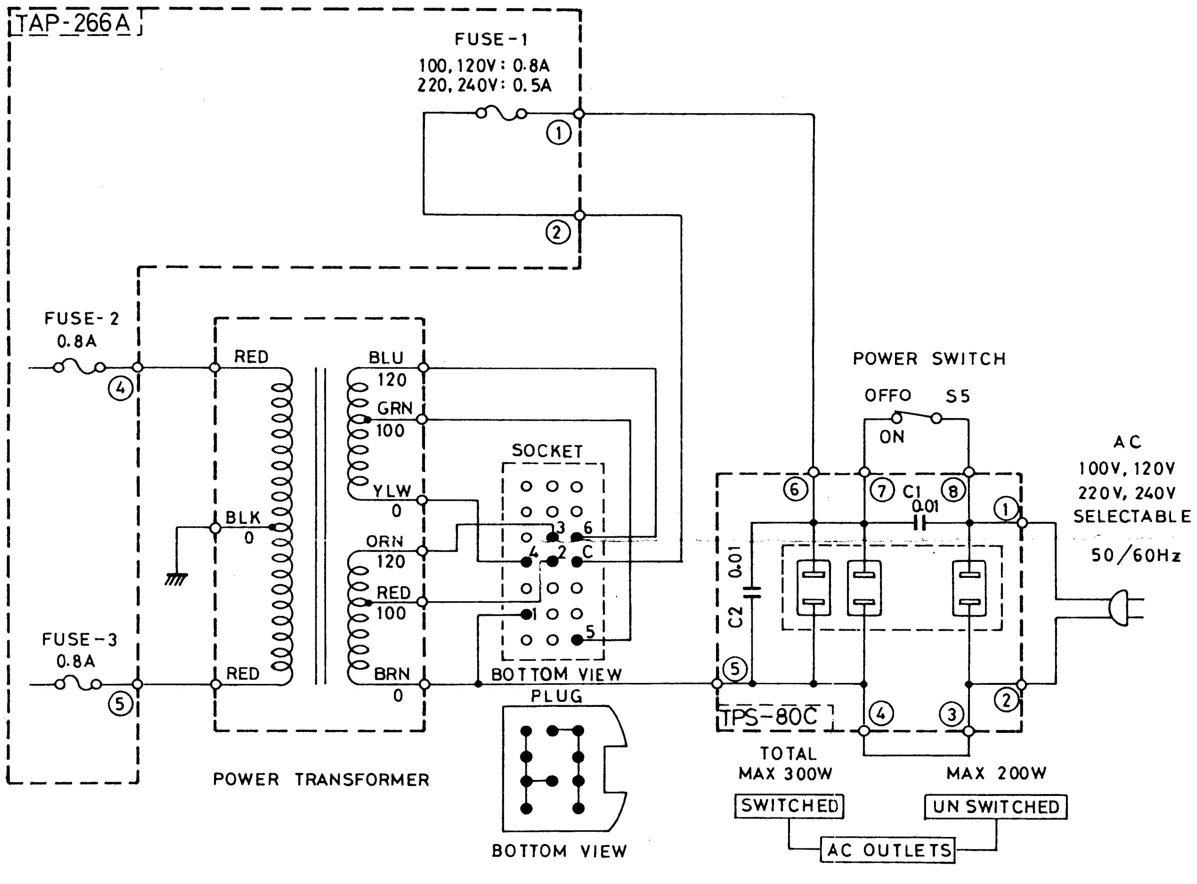
(U.K.), (


TAP-266
FUSE-2
800m AT
④
FUSE-3
800m AT
⑤

PART NUMBER	DESCRIPTION
QMP1200-244	Power Cord with Plug
QHS3876-162	Cord Stopper
QSL2235-043	Power Switch
QFH53AM-103	Switch By-pass Capacitor : C1
QFH72BM-103	Across the Line Capacitor : C2
QMC0637-001	AC Outlets Ass'y
QMF61U1-R80	Fuse (Primary) 0.8 A
QMF61U1-R80	Fuse (Secondary) 0.8 A
E03676-002	Line Voltage Select Socket
E03676-001	Line Voltage Select Plug
TPS-80B	AC Block P.C. Board Ass'y
TAP-266A	S.E.A. Amp. & Power Supply Block P.C. Board Ass'y

(Note)

(U),(P),(F) for PACEX NEX and OTHER COUNTRIES


TAP-266A
FUSE-1
100, 120V: 0.8A
220, 240V: 0.5A
①
②
FUSE-2
0.8A
④
FUSE-3
0.8A
⑤
RED
BLK
0
RED
BLU
120
GRN
100
YLW
0
ORN
120
RED
100
BRN
0
POWER TRANSFORMER
SOCKET
3
6
4
2
C
1
5
BOTTOM VIEW
PLUG
BOTTOM VIEW
POWER SWITCH
OFFO
S5
ON
⑥
⑦
C1
0.01
⑧
①
C2
0.01
⑤
TPS-80C
④
③
②
TOTAL
MAX 300W
MAX 200W
SWITCHED
UN SWITCHED
AC OUTLETS
AC
100V, 120V
220V, 240V
SELECTABLE
50/60Hz

Selectable to plug
in 100V, 120V, 220V, 240V position

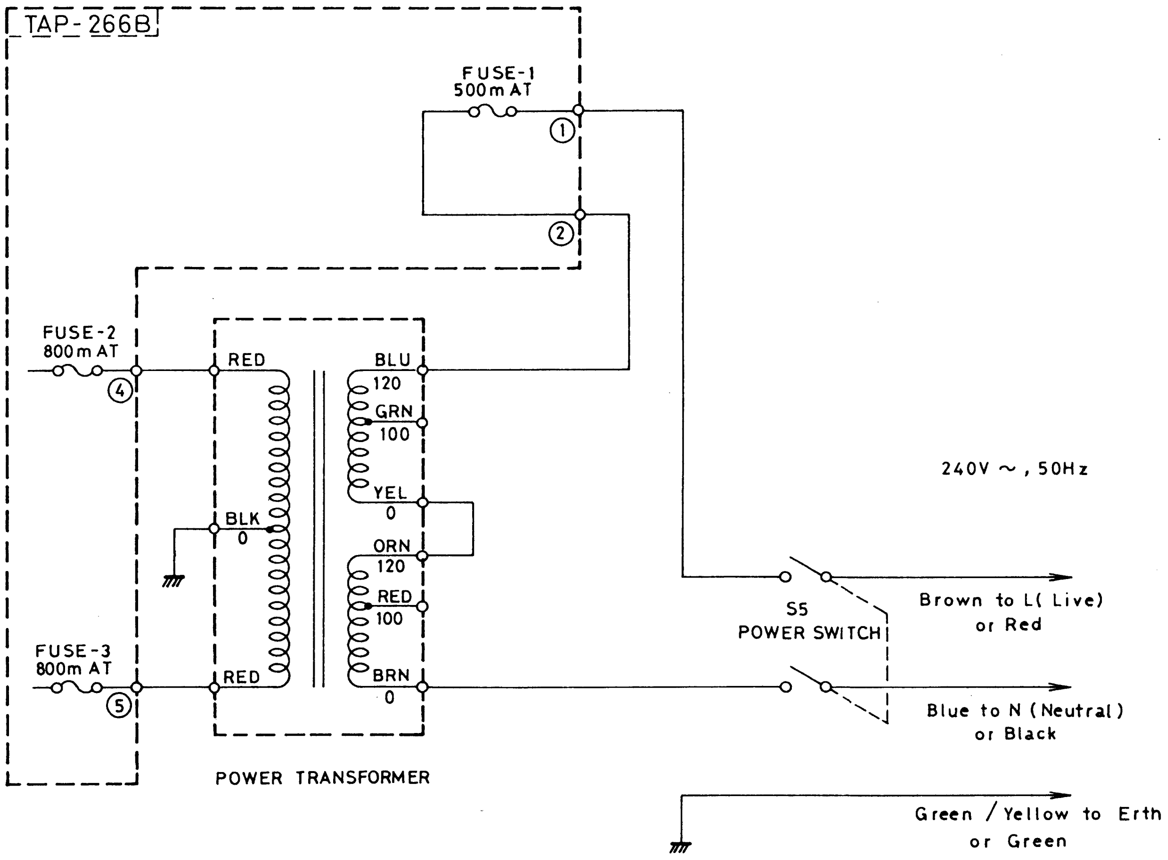
PART NUMBER	DESCRI
QMP1200-244	Power Cord with Plug
QHS3876-162	Cord Stopper
QSL2235-043	Power Switch
QFH53AM-103	Switch By-pass Capacit
QFH53AM-103	Across the Line Capaci
QMC0637-001	AC Outlets Ass'y
QMF60R1-R80	Fuse (Primary) for 100 V, 120 V Lir
QMF60R1-R50	Fuse (Primary) for 220 V, 240 V Lir
QMF60R1-R80	Fuse (Secondary) : 0.8
E03676-002	Line Voltage Select So
E03676-001	Line Voltage Select Plu
TPS-80C	AC Block P.C. Board A
TAP-266A	S.E.A. Amp. & Power P.C. Board Ass'y

(Note)

PART NUMBER	DESCRIPTION
E03544-001	Power Cord with Plug
QHS3876-162	Cord Stopper
QSL2235-044	Power Switch
QMF51A2-R50	Fuse (Primary) : 500 mAT
QMF51A2-R80	Fuse (Secondary) : 800 mAT
TAP-266B	S.E.A. Amp. & Power Supply Block P.C. Board Ass'y

(Note)

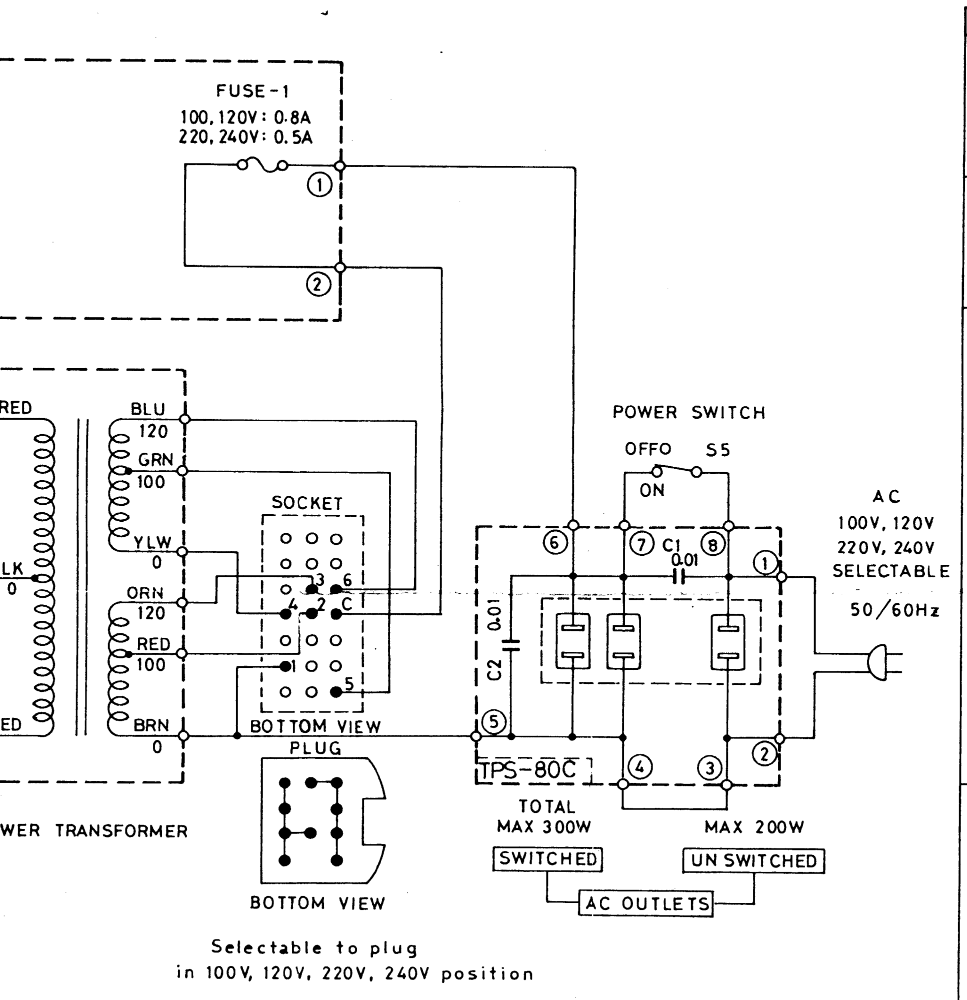
(U.K.), (A) for ENGLAND and AUSTRALIA


TAP-266B
FUSE-1
500m AT
①
②
FUSE-2
800m AT
④
FUSE-3
800m AT
⑤
RED
BLK
0
RED
BLU
120
GRN
100
YEL
0
ORN
120
RED
100
BRN
0
POWER TRANSFORMER
240V ~ , 50Hz
S5
POWER SWITCH
Brown to L(Live)
or Red
Blue to N (Neutral)
or Black
Green / Yellow to Erth
or Green

PART NUMBER	DESCRIPTI
QMP9020-003	Power Cord
QHS6374-252	Cord Stopper
QSL2235-044	Power Switch
QMF51A2-R50	Fuse (Primary) : 500 r
QMF51A2-R80	Fuse (Secondary) : 80
TAP-266B	S.E.A. Amp. & Power P.C. Board Ass'y

(Note)

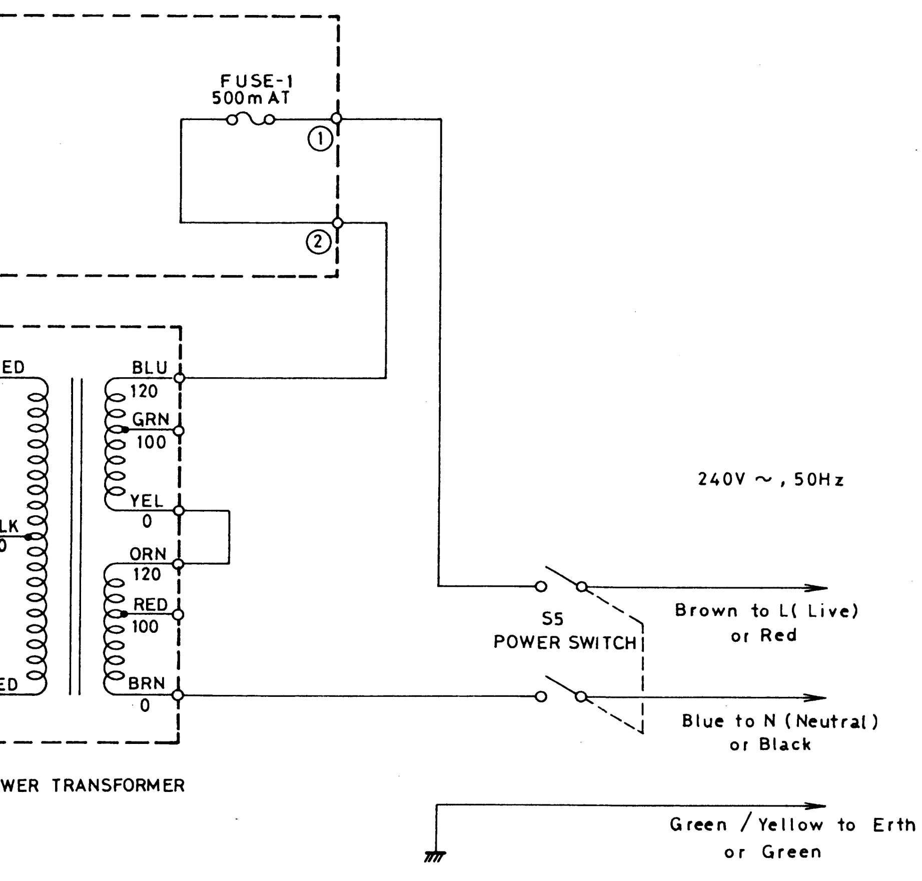
or PACEX NEX and OTHER COUNTRIES


FUSE-1
100, 120V: 0.8A
220, 240V: 0.5A
①
②
RED
LK
0
ED
BLU
120
GRN
100
YLW
0
ORN
120
RED
100
BRN
0
SOCKET
1
2
3
4
5
6
C
BOTTOM VIEW
PLUG
BOTTOM VIEW
WER TRANSFORMER
Selectable to plug
in 100V, 120V, 220V, 240V position
POWER SWITCH
OFFO S5
ON
⑥
⑦
⑧
C1
0.01
C2 0.01
⑤
④
③
②
①
TPS-80C
TOTAL
MAX 300W
MAX 200W
SWITCHED
UN SWITCHED
AC OUTLETS
AC
100V, 120V
220V, 240V
SELECTABLE
50/60Hz

PART NUMBER	DESCRIPTION
QMP1200-244	Power Cord with Plug
QHS3876-162	Cord Stopper
QSL2235-043	Power Switch
QFH53AM-103	Switch By-pass Capacitor: C1
QFH53AM-103	Across the Line Capacitor: C2
QMC0637-001	AC Outlets Ass'y
QMF60R1-R80	Fuse (Primary) for 100 V, 120 V Line : 0.8 A
QMF60R1-R50	Fuse (Primary) for 220 V, 240 V Line : 0.5 A
QMF60R1-R80	Fuse (Secondary) : 0.8 A
E03676-002	Line Voltage Select Socket
E03676-001	Line Voltage Select Plug
TPS-80C	AC Block P.C. Board Ass'y
TAP-266A	S.E.A. Amp. & Power Supply Block P.C. Board Ass'y

(Note)

r ENGLAND and AUSTRALIA


FUSE-1
500mAT
①
②
ED
LK
0
ED
BLU
120
GRN
100
YEL
0
ORN
120
RED
100
BRN
0
WER TRANSFORMER
240V ~, 50Hz
S5
POWER SWITCH
Brown to L(Live)
or Red
Blue to N (Neutral)
or Black
Green / Yellow to Erth
or Green

PART NUMBER	DESCRIPTION
QMP9020-003	Power Cord
QHS6374-252	Cord Stopper
QSL2235-044	Power Switch
QMF51A2-R50	Fuse (Primary) : 500 mAT
QMF51A2-R80	Fuse (Secondary) : 800 mAT
TAP-266B	S.E.A. Amp. & Power Supply Block P.C. Board Ass'y

(Note)

11. Packing Materials and Part Numbers

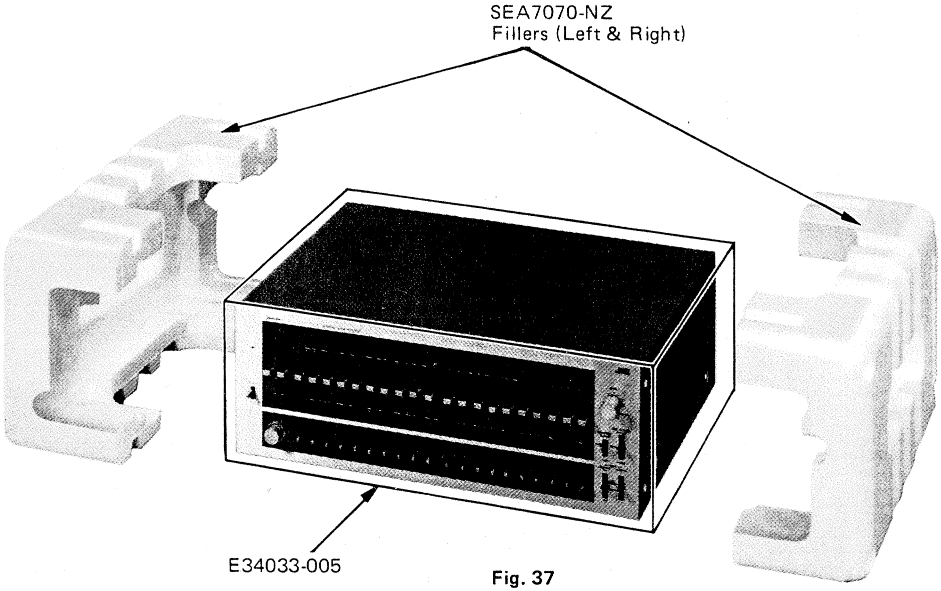
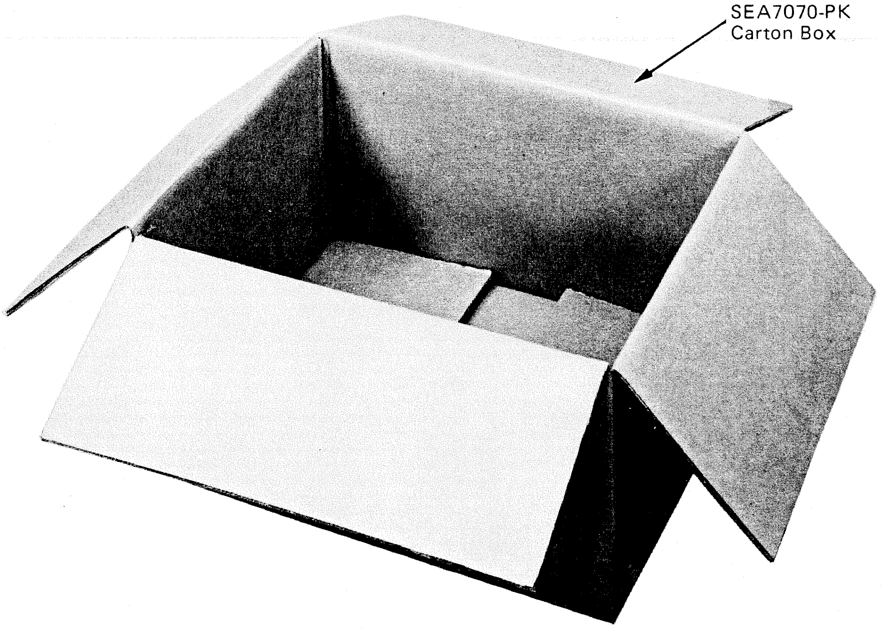

SEA7070-NZ
Fillers (Left & Right)
E34033-005

Fig. 37


SEA7070-PK
Carton Box

12. Accessories List

Part Number	Description	Q'ty
E30580-631A	Instruction Book	1
BT20020C	Warranty Card (U.S.A.)	1
BT20014	" (PACEX)	
BT20029	" (Australia)	
BT20013	" (U.K.)	
E03479-001	Signal Cord	2
E64207-002	Envelope (for Accessories)	1
BT20023	Service Procedure (U.S.A. only)	(1)
BT20024B	Special Reply Card (U.S.A. only)	(1)